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8
Soap

'S YOUR AROMATIC
I.Q.?



• Here are six questions that will test your knowledge of recent odor developments. If you can give the right answers to two of them, that's fine. If you can answer four of them rightly — that's dandy. If you hit them all on the nose—that's fine and dandy. At any rate, take a flyer at them and if you're stumped you'll find the correct answers on page 77.

What new substitute faithfully reproduces the odor of natural bergamot — yet sells for less than half the price?

3 What is the name of a popular line of products used to perfume and color paradichlorobenzene in one operation?

5 What comparatively new and economical odor substitute is now available for oil of camphor sassafrassy?

What new synthetic witch hazel perfume has a strength approximately 150 times greater than that of the natural extract?

4 Name three fly spray odors which simulate the odor of fresh meadow air.

6 If you want to perfume a new liquid fly spray, or if you want to modernize the odor of your present product, what company would be your logical source of supply?

NOW TURN TO PAGE 77 FOR THE CORRECT ANSWERS

and Sanitary Chemicals

ONE YEAR HAS TOLD THE STORY!

Sopanox, Monsanto's superior antioxidant, has won approval from soap manufacturers for its ability to retard soap discoloration and rancidity!



Sopanox, an amino compound, has come through its first year of use with flying colors! Tested thoroughly by soap manufacturers during this period, this soap antioxidant has been approved for its ability to restrain oxidation and the resulting discoloration, rancidity and other adverse qualities.

A valuable addition to soap processing, Sopanox is efficient in soaps, whether produced from animal or vegetable oils, filled or unfilled.

And yet it is used in such small concentrations that its cost is nominal enough to be included in many soap formulations.

Sample and prices, together with further information, on properties and methods of application, will be sent on request. MONSANTO CHEMICAL COMPANY, Phosphate Division, St. Louis, U. S. A. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Montreal, London.

SPECIFICATIONS OF SOPANOX

APPEARANCE: Light gray to white non-hygroscopic powder
MELTING POINT: Above 120° C.
DECOMPOSITION POINT: 170° C. to 175° C.
pH OF 1.0% SOLUTION: 11.0
SOLUBILITY: Cold water: 1%
Water at 75° C.: 5%
Cold Alcohol: 15%

MONSANTO CHEMICALS
SERVING INDUSTRY... WHICH SERVES MANKIND

The WORLD'S FAIR enough

The world always recognizes honest value and honest effort to produce the best. Fuld products bow in acceptance of the honored place that leading supply dealers have given them.

3 QUALITY RANGES in PERFUMED DEODORANT BLOCKS

When a cleaner odor is smelled, a Fuld Vitozone Deodorant Block makes it. In them is sealed, airtight, all the perfuming, manufacturing, and packaging quality that modern science can apply. In addition to the VITOZONE processed blocks, many dealers also feature Fuld's PARA-LEL and AIRAID Blocks, which are leading in sales wherever price is the important factor. Exclusive and standard sizes and shapes from 1 to 40 ounces.

A clean bill of HEALTH for PINE OIL DISINFECTANTS COEFFICIENTS 2 TO 5.

Fuld's disinfectants are manufactured with such accuracy that they fulfill EVERY claim on their labels without exception. Fuld's pure, steam-distilled, Pine Oil Disinfectants are graded to meet every price of popular usage, and are offered in a broad range of color depths in qualities meeting the official "commercial standards" specifications.

Selling
Jobbers
ONLY!

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BALTIMORE

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METROPOLITAN NEW YORK OFFICE: 127 TROUTMAN ST., BROOKLYN, N. Y. TELEPHONE: EVERgreen 8-2498

It's LOADED!

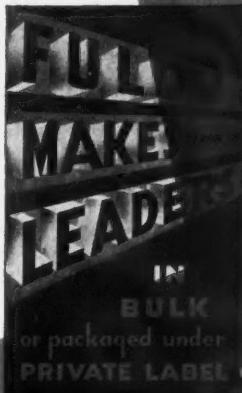


with FULD'S ROACH POWDER!

This new self-dispensing duster package is the handiest short-cut to roach control that you have ever put into a janitor's hands. They like it because it does the work of a special gun.—it's always ready,—and there's nothing to fill. When buyers adopt Fuld's 95% active ingredient Roach Powder, they pay the roaches their LAST respects.

BREVITEE Metal POLISH

The quick acting metal polish that was built for short working days and big jobs. It brings the brilliance out quicker and leaves the surface with a lustrous film to retard corrosion and tarnish. Brevitee has won a reputation for doing most metal polishing jobs in "less"—less work, less time, less odor, less selling effort—so let's get the orders.



DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
INSECTICIDES
DISINFECTANTS
SELF POLISHING WAXES
PASTE WAXES

POWDERED WAXES
FLOOR SEALS
FLOOR TREATMENTS
METAL POLISHES
FURNITURE POLISHES
PLUMBING SPECIALTIES
SPECIAL CLEANERS
SOAP DISPENSERS
DEODORANT BLOCK HOLDERS

FULD BROS



Controlled pouring—"as much as you want and no more"—best describes

Anchor Hocking's Pourclean Bottles for drugs and pharmaceuticals. The stream flows out smoothly, stops the instant you want, cuts off clean, and there is no after-drip.

All due to the special design of the pouring lip! You will like these Pourclean bottles as soon as you

see and try them. Sizes?... nine of them from 3 to 80 oz., liquid capacity. Let us send you samples and submit prices based on your requirements. ANCHOR HOCKING GLASS CORPORATION, Lancaster, Ohio.

ANCHOR HOCKING
-an unbeatable combination



Soap

Volume XV
Number 6

and Sanitary Chemicals

JUNE
1939



SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 71.



Contents

• Editorials	19
• Trouble Shooting in the Soap Plant.....	21
• Soap—what new uses?..... By Paul I. Smith	24
• A Review of the World Situation in Oils and Fats By C. E. Lund	27
• Mixing	30
By C. R. Lockard	
• Liquid Soap Manufacture.....	57
• Insecticide-Disinfectant Meeting	98
• A Summary of the Insecticide and Disinfectant Legislative Situation	100
By C. L. Fardwell	
• Insect Repellents	103
By Dr. L. B. Kilgore	
• White Shoe Cleaners—(III). By C. S. Glickman	113
• Contracts Awarded	45
• New Trademarks	47
• Raw Material Markets.....	51
• Raw Material Prices.....	53
• Products and Processes.....	59
• New Equipment	63
• New Patents	65
• Classified Advertising	139
• Advertisers' Index	144

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JUST IN TIME FOR A BANNER SEASON!

Felton's *new* Tested

Perfume

for "Para."

Paraperfume No. 18 is the result of many months of painstaking effort to develop the ideal odor for perfuming Paradichlorbenzene.

Perfume No. 18 meets all the specifications the manufacturer of "Para" products has been seeking for years—complete coverage, pleasant clean scent, lasting and without change until the

final crystal has evaporated, entirely soluble in "Para," no discoloration, and unusually economical in cost.

From every angle Paraperfume No. 18 is a sales winner! There's still time to use it to improve this season's products
... so

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Balter Bldg.

Chicago, Ill.
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Salt Lake City, Utah
2225 S. 5th St., East

Philadelphia, Pa.
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Los Angeles, Calif.
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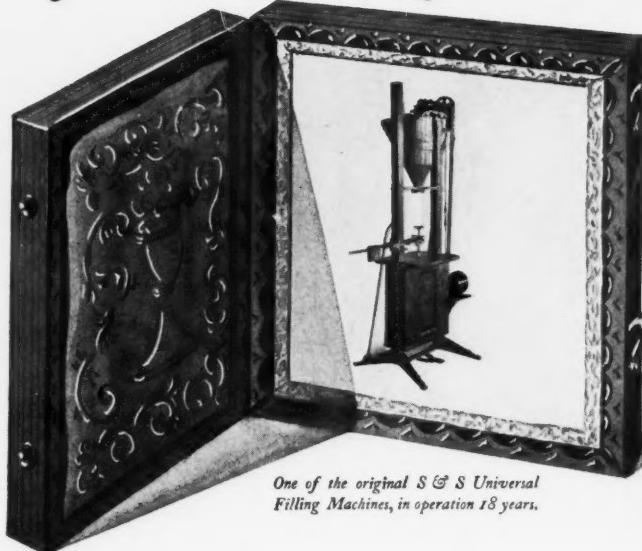
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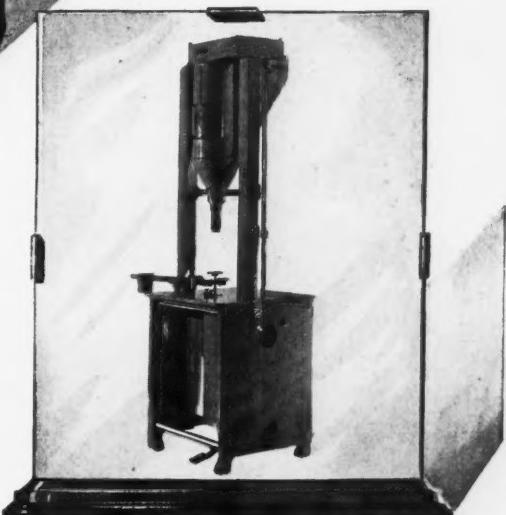
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137 Wellington St., W.

\$nap\$hot\$ From the Family Album



One of the original S & S Universal Filling Machines, in operation 18 years.

"Don't mind Grandpa. He was an ace in his day and he can still do a good day's work. If I'm more modern and efficient than he—well, that's just a sign of the times. Get to know me, I'd like to show you my bag of up-to-date tricks."



The latest model S & S Universal Filling Machine.

Yes, modern manufacturing methods demand modern machinery. And it is the everlasting aim of Stokes & Smith Company to develop the finest in packaging machinery. The results of their efforts are at your disposal—ready to profitably serve you, as they have long served many industries.

FILLING MACHINERY—CARTON FILLING AND SEALING MACHINERY—TIGHT WRAPPING MACHINES—TRANS-WRAP CELLOPHANE PACKAGING MACHINES. SPEEDS TO SUIT YOUR NEEDS—15-30-60-120 PER MINUTE.

STOKES & SMITH CO
PACKAGING MACHINERY PAPER BOX MACHINERY

4915 Summerdale Ave., Philadelphia, U. S. A.



*Make THIS
test of odor
importance*

**Smell the Scent of
2 Brands of Soap
... and Compare their
Degree of Success**

Retailers say Odor in soap is more important than its efficiency as a solvent . . . when it comes to new users . . . new buyers. The Odor alone can be judged before purchase. Result: they judge by Odor . . . then buy.

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Stable in Cold Process Soap
FOUGERE 18005
BLUE LILAC 18011
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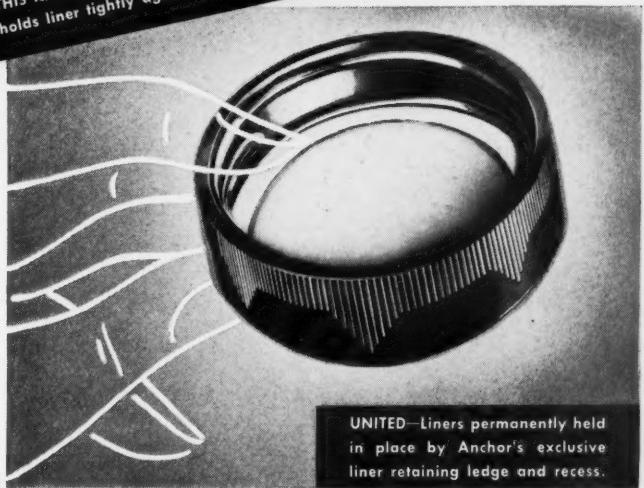
**AROMATICS DIVISION
GENERAL DRUG COMPANY**

170 Varick St., New York
9 S. Clinton St., Chicago

Transportation Bldg., Los Angeles
907 Elliott St. W., Windsor, Ont.

PROTECTION

A CONTINUED
STORY



ANCHOR MOLDED CAPS

provide important advantages to manufacturers and packagers . . . their story is one of product protection . . . complete protection that continues until the product is finally used up. The method by which liners are held in place, unique with Anchor, is the answer . . . a *liner retaining ledge* that holds liners in place and a *liner recess* that allows them to rotate freely. Thereby you are assured that liners are always present, never fall out and do not stick to bottle tops. No adhesives are required. Look for this liner retaining feature, your key to sealing efficiency, when next you buy or consider the use of molded caps. Insist on it because it's a big factor in avoiding leakage or evaporation, complaints and returns, as well as promoting consumer good-will. May we send you further data and samples? ANCHOR CAP & CLOSURE CORPORATION, Long Island City, N. Y. and Toronto, Canada. Closure Division of Anchor Hocking Glass Corporation.



ANCHOR HOCKING GLASS CAPS
-an unbeatable combination-

OIL THYME WHITE & RED

CARVACROL

PHELLANDRENE

Three products well-known to
every Soap maker. We are
prepared to supply your needs
on spot or contract basis.

Working Samples on Request.

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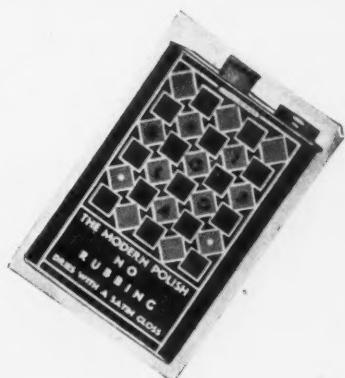
Cosmetic Raw Material
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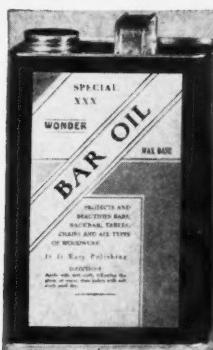
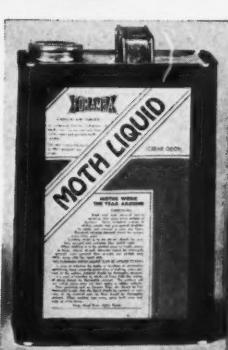


For
Quality Plus
—Consult Us



WE
SPECIALIZE
IN PRIVATE
BRAND PACKING
FOR THE JOBBER

LET US QUOTE
ON YOUR
REQUIREMENTS



UNCLE SAM CHEMICAL CO., INC.

329 East 29th Street

Established 1915

New York, N. Y.

*Build Business on
Your Own Brands of Quality*



DAVIES-YOUNG PRODUCTS AND MERCHANDISING

Build greater sales volume and profits on repeat business from satisfied users of Davies-Young Liquid Floor Waxes—PLUS the merchandising aids we offer to selected jobbers who qualify.

PRIVATE LABELS: "Beamax" or "Cirene" can be supplied in any size containers under your label, if desired: distinctive, modern label available for your brand and company name.

ADVERTISING FOLDERS: Attractive envelope stuffers, ready for you to use in promoting the "Beamax" grade as your own brand of Liquid Floor Wax. Imprinted with your brand name.

"BEAMAX" BRAND: Where you desire to cash in on the reputation and acceptance of this established manufacturer-brand—we can furnish "Beamax" in pint, quart and gallon *lithographed cans*; in other sizes under "Beamax" Label. Also "Beamax" advertising folders for your imprint as distributor.

Davies-Young self-polishing Liquid Waxes for all types of floors



"BEAMAX" *Dries to a Lustre* LIQUID WAX

"BEAMAX" dries to a hard, lustrous finish in 20 minutes or less. The thinner the coat of wax, the better the result. No polishing is required. Each cleaning with a dry buffer will enhance the lustre. It is recommended for all types of floors. Floors are easily kept clean by use of a broom or dry mop; where necessary, they may be washed with a weak soap solution. Dirt does not adhere to the surface.

"BEAMAX" is a perfect emulsion and will not settle out even when stored for long periods. Sold in drums, half-drums, quarter-drums, 10-gal., and 1-gal. cans.

"CIRENE" *Dries to a Lustre* LIQUID WAX

"CIRENE" is a special water-resisting, quick-drying Wax. It will not show water spots, or mark in any way with water, 30 minutes after it is applied. Especially desirable for restaurants, soda fountains, and buildings subject to continual traffic. Floors can be waxed in wet weather and used almost immediately. "CIRENE" is suitable for all types of floors. Apply a thin coat; it dries in 10 to 20 minutes to a hard, lustrous finish without polishing. "CIRENE" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans.

MAIL
THIS COUPON
TODAY

The Davies-Young Soap Company
Dayton, Ohio

We are interested in your Floor Waxes. Please tell us your proposition on

"Beamax" and "Cirene" Brands

Private Brands

NAME

STREET

CITY & STATE

INTERESTING USES OF ALKALIES



How Sodium Bicarbonate Aids Airplane Dependability

To insure the dependable performance of the all-important batteries which supply modern aircraft with light, radio and other vital essentials it is customary to clean them regularly with Bicarbonate of Soda.

United Air Lines reports that all batteries in their planes are cleaned in this way at the termination of each flight, usually ranging from four to twelve hours. A brush dipped in a solution of four tablespoonfuls of bicarbonate of soda to a pailful of water, is applied to the terminals and other parts of the outside of the batteries which have come in

contact with acid. Fresh water is used afterwards for rinsing.

The quantity of COLUMBIA "Bicarb" used for the above purpose is infinitesimal compared with the volume absorbed by other industries, yet the same quality is to be found in a carload as in a spoonful. This is characteristic of all COLUMBIA products and makes them the choice of leading users in the glass, paper, soap, textile, chemical, food and drug industries throughout the Nation. And a fitting corollary to the dependability of COLUMBIA Products is the dependability of COLUMBIA Service.

COLUMBIA

SODA ASH • CAUSTIC SODA • SODIUM BICARBONATE • •
MODIFIED SODAS • LIQUID CHLORINE • CALCIUM CHLORIDE

THE COLUMBIA ALKALI CORPORATION
BARBERTON, OHIO

NEW YORK • CHICAGO • BOSTON • ST. LOUIS • PITTSBURGH • CINCINNATI • CLEVELAND • MINNEAPOLIS • PHILADELPHIA



Sudsing Power OF SOAPS INCREASED BY TETRA SODIUM PYROPHOSPHATE



AMONG the many outstanding characteristics of Victor Tetra Sodium Pyrophosphate is its ability to increase the sudsing power of soap. By actual test one ounce of anhydrous TSPP is capable of releasing 2.3 ounces of soap (calculated as sodium stearate) from combination as insoluble soap. The soap thus freed produces essential sudsing action.

The two cylinders here pictured contain water of 150 parts per million hardness and 2/10% of a commercial type soap powder. Composition of the soap powders used are as follows:

	Left Cylinder	Right Cylinder
Soap	66.5%	62.2%
Anhydrous Sodium Silicate	7.3	3.3
Soda Ash	4.4	4.4
Anhydrous TSPP . . . . .	. . .	10.5
Moisture	21.8	19.6

Although the left hand cylinder contains more anhydrous soap, there are no suds because all of the soap has been consumed in softening the water. The cylinder on the right, containing less soap than its companion, has copious suds. The pyro present has liberated the soap from combination with magnesia, thereby making it available for sudsing and detergent purposes.

Anticipating the demand for tetra sodium pyrophosphate as a soap builder, Victor developed an improved manufacturing technique . . . built the largest plant of its kind in existence today . . . was first to meet the demand for a product of uniformly high quality.

VICTOR CHEMICAL WORKS
141 W. JACKSON BOULEVARD CHICAGO, ILLINOIS

New York, N. Y.; Kansas City, Mo.; St. Louis, Mo.; Greensboro, N. C.

Plants: Nashville, Tenn.; Mt. Pleasant, Tenn.; Chicago Heights, Ill.

VICTOR

HEADQUARTERS FOR...
phosphates



DORCELLE

DORCELLE . . . a truly ideal perfume for fine soaps, lightly floral, non-discoloring, amazingly stable. DORCELLE is a product which we know will be of interest to all soap manufacturers. Priced at \$4. per pound. We will be pleased to submit samples of DORCELLE.

**VAN AMERINGEN-HAEBLER, INC.
315 E. 42nd ST., NEW YORK CITY**

THAT FAIR THE BEST

... strength has been increased, and modern design makes the most of the sparkling display appeal of Glass.

There's profit in a modern salespackage — a story that any Owens-Illinois representative will be glad to give you in detail. He is backed by broad experience and a group of packaging experts who have worked modern miracles with glass containers. Talk to the O-I Representative. No obligation is implied or entailed.

Owens - Illinois Glass Company, Toledo, Ohio.

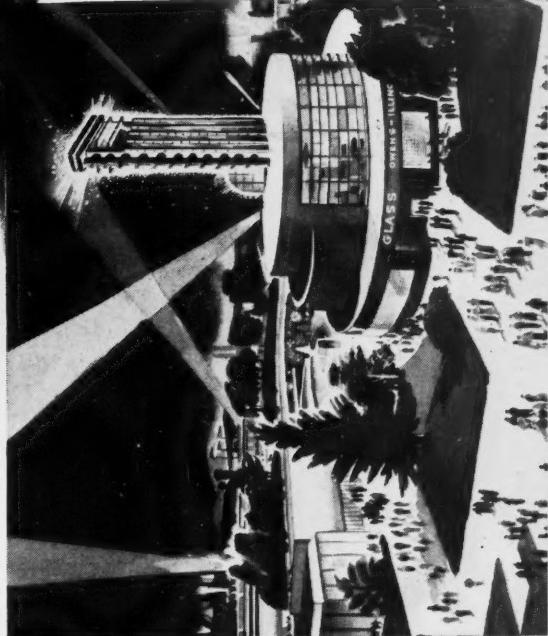
- Whether it's Beauty on the Boulevard or your package on a shelf—it's the fair, the bright, modern and attractive that fare the best. And when it comes to attractiveness in a package, there's nothing that compares in eye appeal with Glass. Here is a thoroughly adaptable packaging material that in its final form has undergone tremendous improvements. Shipping weights have been drastically reduced.

OWENS-ILLINOIS "FIRST IN GLASS"

IT'S THE

- This is Fair Year! New York and San Francisco will cater to millions. Owens-Illinois is proud of its exhibits at both. Illustrated at left is the Glass Center — the fair home of Owens-Illinois. Here you can see miracles worked in glass before your own eyes. Be sure to visit us. The main illustration shows another exhibit — The Library Building, at the World's Columbian Exposition at Chicago in 1893.

We will be glad to send
(17½ x 8½ without advertising)
you a reprint of above illustration
upon request. Please mention
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JONES TOGGLE OPERATED Soap PRESSES

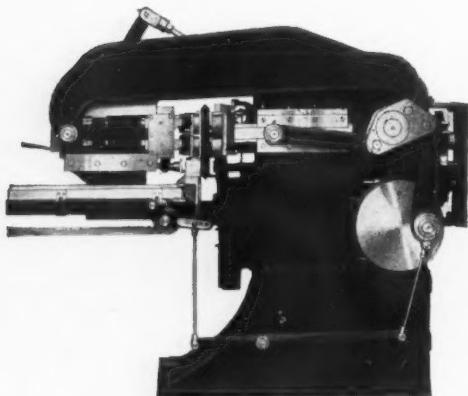
*Save hundreds of dollars more
per year than earlier models!*

Their long toggle pressure makes the soap cohere so that particles do not stick to the dies. This makes long runs possible without stops for cleaning. Such stops on old model presses put the whole line out of production for more minutes per day than you will realize without adding them up.

Again, dies which accumulate scrap press only a few cakes before they begin to lose their finish and clean impression. If run too long before cleaning, many cakes will have to be remilled and pressed again. This costs money, but it costs more in loss of sales to neglect it.

Toggle Operated Presses also insure higher production, prevent early depreciation, multiply by three the life of dies and conserve the nerves of your employees by their noiseless, efficient operation.

Many successful soap makers are replacing old models with



Type K Toggle Operated Toilet Soap Press

JONES TOGGLE PRESSES

R. A. JONES & COMPANY, INC.

BOX 485

CINCINNATI, OHIO

As the Editor sees it..

ACCORDING to an advertisement in a Wisconsin newspaper, there are 154 "hidden" taxes on a cake of soap. These are paid all the way from the farmer who produces the original raw material, by the producer and refiner of the oils and fats, by the soap manufacturer himself, by other producers of raw materials, by the transportation companies which carry the soap to market, and by the wholesalers and retailers who distribute and sell the soap. But, we will gamble that out of these 154 taxes, the remaining 153 put together do not amount to one-hundred per cent of the cost of the raw material, which is the case with the three-cent excise tax on imported oils and fats.



IN AN address before the National Cottonseed Products Association at a recent meeting in New Orleans, C. E. Lund, Chief of the Fats and Oils section of the Bureau of Foreign & Domestic Commerce, had the following to say: ". . . admit the lauric acid containing tropical oils free of all import taxes provided they are first denatured, so that they are available only for soap and other industrial uses, thereby relieving the pressure on the domestic edible field of these actual and potential competing supplies. This procedure would raise the world price level of the lauric acid containing oils and minimize their ability to compete with oils and fats which the United States exports to Europe."

In making this statement, Mr. Lund was not putting it forth as his own view, but

merely quoting one of the reasons which have been advanced by those advocating the duty-free admission of denatured coconut oil for the soap kettle. Nevertheless, it does comprise a very potent argument why every pound of coconut or palm-kernel oil which is shut out of the American market by a high excise tax, takes the place of a pound of American cotton oil in the export markets.



FROM some small soapers we have heard for many a year that they are being beaten down by their larger competitors in the fight for business. To a certain extent, this may be true, so keen has been the competition in the soap industry, particularly in industrial and bulk soaps, and in private brand and unbranded goods. The point has been made that the larger firms enjoy lower costs which are vitally important in any manufactured commodity, especially where price variations are normally only a fraction of a cent. However, we do not believe that size alone is an important factor in production costs. If efficiency of operation is not coupled with large production, the chances of unnecessary high costs are greater than in a small plant.

Over a period of years, we have had the privilege of observing soap plants, both large and small. Long ago, we arrived at the conclusion that the larger plants on the whole are better equipped and better operated, and as a consequence, more efficient from the cost angle. Too many of

our small plants are using 1899 equipment and methods in attempting to compete with plants of the 1939 variety. It has been our observation that in general the small plants which have kept abreast of the times in methods and equipment, have continued to maintain their competitive positions.

We may read in books and magazines that soap is made today just as it was made by the Romans,—but don't believe it. Modern soap equipment has undergone great changes, and those who refuse to change with the times, cannot expect much else but to suffer the consequences. Look your plant over. Maybe it's not your competitors' fault at all,—maybe you just need a new dryer or plodder or press. Think it over. If your plant is a "junk man's delight," how can you expect to compete?



YEAR after year, taxes, all kind of taxes, go up, up, up! It is not alone the tremendous tax totals each year which worry business men. The fact that the tax tide is always rising, going higher each year, is the most disturbing factor. New taxes become old taxes as still newer ones are added to the list. So called emergency taxes become permanent fixtures. Rarely is a tax reduced or eliminated except where it is replaced by something more expensive to the taxpayer.

Now, if the average business man were convinced that these taxes were vitally necessary, he would be less inclined to rebel. But he knows differently. He sees every day disgusting examples of gross waste of public money by politicians,—sees increasing amounts of his and other money spent not for the public good, but for political baubles to win votes in the next election. But what can he do? He can at least protest,—and by protest, we mean protest in blunt language **every time** any new or increased tax is proposed anywhere,—in Congress, state legislature or local council.

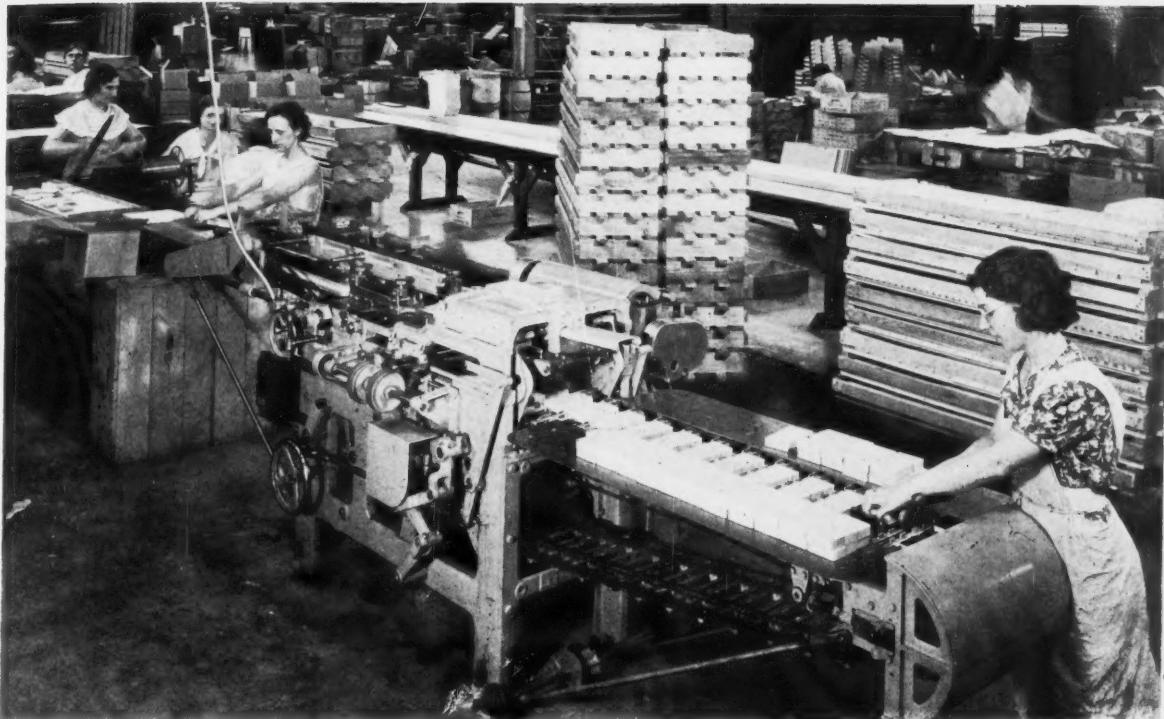
Let us have a vacation from this constant **rising tide of taxes**, at least long enough to catch our collective breath, and find out just where we are headed. Enough is enough,—and we have had enough of tax increases!



FOR the time being, at least, it would appear that the spray soap patent situation has subsided into a state of quiescence. With a reversal by the U. S. Circuit Court of Appeals of the district court decision in the Coltman patent case, the Lamont Patent assumes again its paramount position. Quite obviously, it never really lost this position in spite of the two district court decisions to the contrary. But for a time, what with all this talk of prior patents, damages, and accountings,—during which such large amounts of money were mentioned that a million dollars was only worth a snap of the fingers,—we had visions of considerable excitement in this spray soap business. But with the reversal by the appeals court, quiet returned once again to the spray soap front, temporarily at least.



SOMETHING like ninety-five per cent of all packages for products coming under the new Food, Drug and Cosmetic Act are in the course of being redesigned, revamped, or relabeled, according to an authority on packaging. Accordingly, activity among manufacturers of packages of various and sundry kinds is said to be positively feverish. And then again when the Food and Drug Administration has a look at some of the new packages and their labels, they will probably have to be redesigned once more. It sure is an ill wind, this new drug act, except for the package people, the label experts,—and last but not least, the dear old legal fraternity.



...trouble shooting in the Soap Plant

USUALLY those who go looking for trouble find it whether it be in a soap factory or anywhere else. But, as every soap maker knows, trouble does not have to be sought out in the average soap plant. It is an unwelcome visitor which appears as from nowhere at the most inopportune times. Its origin is frequently shrouded in deep mystery,—and it is this mystery of origin, sometimes freakish, which so drives plant superintendents, soap makers, and chemists close to the verge of madness. Some trouble shooting has its humorous side, but in most instances, it is a very serious business, occasionally with somebody's job at stake.

When a kettle boils over or a piece of equipment goes out of commission, the trouble is obvious and little time is spent searching for the cause. But when soap starts coming back to the factory with hot letters of complaint, or displays its defects before it even leaves the plant, that is another matter and one which may have its origin in any number of a dozen different causes. And so it is in settling down the following account of an actual "trouble" incident which

occurred a few years ago in a large American soap plant. For obvious reasons, the plant and the writer as well must remain unknown. Also an attempt to conceal the location and identity of the plant has been made. And as they say in the movies, "any similarity to existing persons or places is purely coincidental." It might be added also that the views expressed here are those of the writer and not of the publisher.

But, let us get along with the story which started one bitter cold winter morning when I hustled to the plant to begin work. Shortly before, I had been advanced to a position of responsibility for the quality and quantity of production. This promotion, I assure you, was not the reward

Above:—" . . . that pink and green assortment that was pressed yesterday has a full beard now." The soap in the trays was covered with whiskers.

of long years of experience but was in a considerable measure due to the fact that my immediate superior had taken advantage of a better opportunity, and as there was no one available with equally sufficient knowledge of the job, I was elected "to wear the epaulettes." My desire to wrestle with plant problems was being fulfilled in a big way. The place was full of them.

As I walked to the plant, I was wondering what we could do to help No. 2 Unit to hold up production,—better have "maintenance" check the bearings and clearances. Then what was the reason last month's glycerine yield was off 1 per cent. That's bad, —better go over the "lab" figures on fat analysis and check the tonnage delivered to "glycerine." Also, "purchasing" will be after me to O.K. that sample "almost as good,"—guess we better not buy it,—give them an inch and you have "a rope around your neck." These and several other things promised to make the day a full one. As I entered the plant I thought that we had had all the "answers" thus far, so why should today be any different. And it wasn't,—that is for the first ten minutes. Then "it" happened. "It" in this instance was introduced to me by George the foreman on floor 3. "Boss," said George, "you better come up on 3 with me. We have trouble." Well, trouble did not worry me because we have it with us almost all the time in one form or another, so I asked George what the trouble was and what did he want me to do about it. Then George said, "It's the soap, boss, we can't pack that stuff, it has 'whiskers' on it." "Now wait a minute, George," said I, "soap doesn't have whiskers." "Well," said George, "I never saw it before but, that pink and green assortment that was pressed yesterday has a full beard now."

I recalled that that particular assortment had been pressed late the day before and had been placed in trays, loaded on trucks and taken from the press room to the next floor above. It was to be packed in assorted colors by placing the containers on a slow moving belt and the girl packers would pack it according to instruc-

tions. This was a rush job. Incidentally, did you ever notice that nearly all jobs are rush jobs,—or so it would seem?

When George and I arrived on floor 3 he led me to the location of the particular assortment. I have not yet mentioned it, although you probably guessed it, this soap was milled, and as I recall it, the cakes were about four ounces and oval shape.

Sure enough, there it was. Whiskers? Well, not what you would call a full beard, but, for the lack of better description, a sophomorish fuzz, if you know what I mean. Something had to be done and pronto,—but what? Well, first of all, could it be removed and if so, would it come back? The answer to that one was to try it. Accordingly, I set several girls on the job with soft cloth lightly moistened with diluted alcohol. This removed the whiskers and left the cakes in good condition. I should mention at this point that these whiskers appeared in the cakes only in open spaces and not at any place on the area of the cake where a contact was made with the tray or an adjacent cake.

I sent a dozen or so of the cakes down to Walt, the chief chemist, with word to proceed with all speed to find out what it could be and not to "spare the horses." I knew Walt would do a good and thorough job, because I spent several years showing him the job when he came to us after graduating from college. Next I reported the matter to our general manager, who became properly excited and demanded that something be done at once. I remembered that he had often told me of his experiences while "learning the business." The ones he told me invariably had him cast in some part which cost him no prestige. Knowing this, I asked if he had any suggestions and almost instantly regretted it. I was told that it was my job to see that things proceeded normally and if and when I was ready to "give up," he would take charge. This left me feeling my responsibility more than ever. I realized, however, that I was to see and hear more from this gentleman. No

help from that direction, so I went up to see Walt in hopes the laboratory might have found something.

Walt had given the samples our routine examinations, free alkali, free fat, carbonates, moisture, etc., and all were within proper limits. Then we checked back and found that certain other soaps had been milled and pressed from the same lot of flakes. These cakes were all in good shape. That apparently put the O.K. on the soap base and did not leave much else to check. There was color and perfume, of course, but they were being used right along and no trouble. Other duties took me away for a time and later in the day I looked in on Walt and found him busy with a razor blade trying to shave off enough whiskers to obtain a weighable sample. This, of course, was a heart-breaking job, since an hour's work did not yield but a few milligrams. Soon the day was over. Walt and I stayed late in the laboratory "shaving" and discussing the possible cause but to no avail.

HAD I known what the next day had in store for us, possibly my sleep would not have been so sound. The next morning George was waiting for me when I arrived, with news that over night more whiskers had arrived. A part of the previous day's production had taken on a fuzz, not as dense as on a peach but somewhat longer. I experienced a slight relief when I found that the original lot did not show any further spread of the condition. It now appeared that whatever was going to occur, did so promptly and then ceased. Again I gave Walt new samples for analysis and proceeded to report to our general manager the bad news that we had not located the trouble and that we had more of it. As I expected, he then decided to take a hand, which I welcomed. I felt that our procedures were being properly carried out, and by his own word he had a vast experience from which we might be able to draw upon for help. The general manager and I went over the whole thing, samples, laboratory reports, etc., during which time he

was non-committal and finally left for his private office with word that he would see me later.

About an hour later, Walt reported that he had checked the cakes from the latest production and that as far as he could determine the soap was O.K. except for the whiskers. He had by this time a small weighable sample ready to examine. But for what should they be examined? While discussing this question I received a call from the general manager to come to his office. When I arrived he announced that it was his opinion that our trouble was due to mold or similar condition, and that he had called the firm of Heat & Shake, well-known consulting chemists to send someone to look the situation over.

How the general manager arrived at his conclusion, he did not state and I could not immediately bring myself to the same conclusion. True it was, it might be possible but I wanted some definite evidence. Then again, who was I to argue the point. When I returned to the laboratory I told Walt of the general manager's opinions and about Heat & Shake. Walt looked at it all as I did, and we decided that we would do some investigating along this line. Our first thought was that, if it were mold or similar condition that a microscopic examination would be immediately in order. That put a stop to our work at once, because we did not have a microscope in the laboratory. However, Walt offered to take a sample of the whiskers over to the university that evening, stating that he thought Dr. Biochem would be glad to let him have the use of one of their microscopes. It so happened that the Doctor was a friend of mine, so I called him on the 'phone. He was glad to be of any assistance that he could.

AT this point I was again called to the general manager's office, where I was introduced to Dr. Heat of the firm of Heat & Shake. The general manager again stated his opinions of the trouble and then Dr. Heat and I went out into the plant. I went over the whole story

with Dr. Heat, gave him samples, took him into the laboratory where Walt gave him all available data. During my trip around the plant with Dr. Heat, we made occasional stops at which time he produced a Sling Psychrometer or sometimes better known as a whirling hygrometer, taking the readings down in a small notebook. Dr. Heat asked a number of questions, some of which seemed to me to be entirely irrelevant, but I answered as best I could. We then went back to the general manager's office where Dr. Heat, up to this time non-committal, stated that his preliminary examination indicated some kind of growth or mold, which he would have to identify. He further stated that after further examination which he was going to make, it was probable that a quarantine would have to be established to prevent the spread of this condition to our other soaps not yet affected. To all of which the general manager added his approval and suggested certain cleaning and application of certain germicidal preparations to various parts of the plant.

This was certainly a dark hour for me. How could we operate and maintain a quarantine as all of the available floor space was being used? The general manager offered the opinion that we might have to pack up the soap and dump it into the river. Just why, boiling it again would not do, he did not say. Now unless Walt and I could not find what the trouble was then there was nothing to do but await further word from Heat & Shake.

Late in the afternoon I went into the "lab" to see Walt, hoping there might be some good word, but nothing had been found that offered any assistance. Soon the employees were leaving for the day so Walt and I went out and had dinner together, after which Walt left for the university and I returned to the plant. I do not know just what I hoped to gain by going back, but when you have trouble like this, it seems that it's best to keep with it and at it until something turns up,—just keep plugging away. This habit of keeping at

it paid good dividends that night for Walt was to find something that would "explode" the mold theory and I stumbled onto the reason why we had "whiskers."

I went directly to the "lab" when I returned and thought I would shave off a few whiskers and make a few tests myself. It developed, however, that I could not find any samples there, so I went up to floor 3 to get some. When I opened the door for floor 3, I received a shock. It was very cold up there. I thought that to be rather strange and decided I would see the night watchman on his next round. I took my samples back to the "lab" and for the next hour was busy shaving whiskers. Presently the watchman put in his appearance, and just as I was about to ask him the reason for floor 3 being so cold, the 'phone rang. It was Walt.

It developed that Walt had prepared two slides, on one he put a few dry whiskers, the other slide was a culture slide in which he put a few whiskers and a little water. His examination of the dry slide did not yield anything particularly interesting, but when he looked at the culture slide it was a different story,—the "mold" was gone. If there was a growth, it would not act that way. He tried several more with the same results. Well, that settled the theory of the general manager and also Dr. Heat,—and put them back in a class with Walt and myself. Walt said he would make some more observations and let me know if anything further developed. I returned to the watchman.

It developed that the watchman, who was also the night fireman, had of his own accord, just recently been turning off the heat in certain sections of the plant. This procedure made less work for him on the firing job. It so happened that it had been demonstrated that very little, if any, fuel is saved by this practice, so I told him to discontinue this practice and to restore the heat at once.

Returning to the laboratory, it occurred to me that perhaps in some way this extreme cold might have

(Turn to Page 125)

SOAP -

what new uses?

By Paul J. Smith

IN MODERN industry, soap is finding many new applications made possible by its low cost. Most of these uses are unknown to the soaper himself who is usually concerned chiefly with the current tonnage markets for his products. Some of these newer applications are of growing significance, but most of them are at present of minor commercial importance. It is perhaps only natural under the circumstances that soap manufacturers should tend to ignore the newer market channels because of their small size. The average soaper is so busy taking care of his business under highly competitive conditions, that he has little time or inclination to go very far afield to develop new and minor markets.

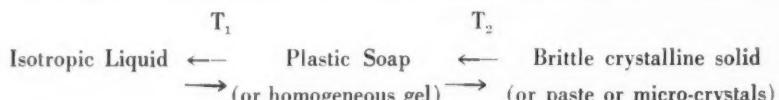
With a multiplication of industrial processes using soap in one way or another, the time may come when it will be well worth while to study deeper into these specialized requirements with a view toward commercial development. In spite of the widening introduction of various soap substitutes, particularly the higher fatty alcohols, straight soaps are still being preferred for the newer industrial applications because (1) they are a great deal cheaper, and (2) they are easier to use than the synthetic detergents and wetting agents. There are several noteworthy cases of recent record where the newer products have not given the uniformity of results as formerly-used solutions of soaps.

A very promising new use has been found for soap in the produc-

tion of dustproofing fluids for the treatment of coal at the pithead. Work on this subject is being carried out by Dr. A. S. C. Lawrence, under the direction of Professor Rideal at the Department of Colloid Science, Cambridge, England. It was found in the early stages of the work that, when the common sodium or potassium soaps are dispersed in oil and spread on a porous coal, the oil soaks in and leaves the soap on the surface. Attempts have, therefore, been made to find a soap that will form a suitable dispersion. According to the 1938 Report of the British Fuel Research Board, it has been found that the soaps and their solutions in oil are characterized by two temperatures, T_1 and T_2 , at which the following two transitions occur:

metals are, in general, lower. The soaps of the trivalent metals are peculiar in that the soaps are soluble at room temperatures and no stable gel has been found. There is no doubt that the dustproofing of coal, if carried out on extensive commercial scale, would undoubtedly require a considerable amount of soap and it might, therefore, repay manufacturers to keep watch on this development during the next few years.

Soap has also been tried out as an emulsifying agent for the preparation of colloidal fuels made from pulverized coal or pitch and heavy mineral oil. Various steam line companies are using such mixtures, and, in the time of a national emergency, there is little doubt that the navy would find it useful to supplement a



At temperatures above T_1 the soap-oil solution is similar in its penetrative effect to that of the untreated oil. At temperatures between T_1 and T_2 the gel has the required properties so far as the micelle dispersion is concerned. At temperatures below T_2 the dispersion is such that the coal can absorb the oil and leave the soap on the surface. The soaps of the monovalent alkali metals have their gel stage at temperatures too high to be useful, the gel temperatures of the alkaline earths are still higher, while those of the divalent

rapidly diminishing supply of oil with home-mined coal.

In the preparation of many asphalt compositions, soap is used for dispersing the bitumen. A favorite method is to emulsify with the aid of soap and then to stabilize the emulsion with a soluble protein, such as blood, albumen, etc., together with a little protein preservative, chiefly formaldehyde. Various types of emulsions are in use, including those containing bitumen, natural asphalt, tar, pitch, etc., and they are often used as a binder to coat thinly fine



Ewing Galloway

particles of clay and other solid mixtures so as to make compositions suitable for roads, waterproofing and the production of building materials.

High molecular-weight alcohols and also soap are used in the actual manufacture of sponge-rubber goods. B.P. 494,336 describes a method of production which makes use of surface tension reducing substances, such as sulphonated lorol or soap, for the surface treatment of the mould, so as to prevent the formation of a skin. Soap is also used whenever a cheap wetting agent is needed in the coating of webs for the manufacture of imitation leather. This is now made by impregnating fabric and felted or corded products with a suitable impregnation-composition which may comprise rubber latex, water, a wetting agent such as soap, stabilizer, accelerating and vulcanizing agent, etc. Soap is also recommended for stabilizing latex and for the preparation of a stable emulsion for industrial use. B.P. 488,265 states that latex can be emulsified in hot water by using soap and the emulsion stabilized by the addition of a

Dustless coal by treatment with low-cost soap emulsions,—coal also in liquid soap emulsion form for pumping to burners,—these are two new prospective tonnage uses for soap in industry.

solution made by dissolving protein matter, e. g. leather, wool, or feather in an alkaline solution. An important development in the use of rubber for proofing textile materials is mentioned by the Rubber Producers Research Association and Wool Industries Research Association in a fairly recent patent, B. P. 483,496. Rubber is deposited from aqueous dispersions onto textile fibres, e. g. of natural or artificial cellulose, silk or wool, by pretreating the fibres with an aqueous solution of a cationic soap compound which gives a positive ion comprising a long chain aliphatic residue and subsequently immersing the fibres in the aqueous rubber dispersion.

Magnesium oleate, triethanolamine stearate, oleate or linoleate are also finding many new applications, particularly as lubricants. An entirely new and very interesting use

for these soaps is mentioned in a recent patent, B. P. 495,770. This describes the manufacture of a special transfer ink adapted to be released from a paper base and rendered adhesive by the application of heat and pressure so as to produce a tough flexible marking on articles which have to resist abrasion and distortion, such as tennis balls, conveyor belts, etc. The basis of the transfer is a vinyl resin mixed with suitable plasticizers, such as butyl phosphate and a soap lubricant of the type mentioned above.

Recent research by the International Tin Research and Development Council shows that tin oleates are useful additions to bearing greases as they reduce wear and so prolong the useful life of metal bearings. Lead soaps are also being advocated for the same purpose by research workers of the American lead industry. An interesting new use has been found for lead soaps in the decoration of anodised aluminium. B. P. 492,838 describes a method. The material is anodically oxidized and the design then printed with a fatty print-

ing varnish containing e. g. 40 per cent soap (lead), and the remainder is dyed with a direct or acid wool dye. The whole is then treated with caustic potash to saponify the oil of the printing varnish and form a soap which spreads to fill the pores of the oxide film.

Water-resisting yarns, fabrics, films, etc., are rendered water-resistant with the aid of soap. A new process, B. P. 485,198 makes use of a resin condensation product which is converted into an insoluble resin in the material. The condensation product is preferably applied in aqueous solution or dispersion, made up of water-soluble soaps or sulfonated oil and the necessary aldehyde ketone and amide resins. The resistance to water may be further increased by coating the material with wax-like substances applied in solution.

In the knitting of asbestos fabrics, a soap lubricant is used. B. P. 468,249 describes a new process of interest to the trade. Asbestos yarn, either pure or mixed with or having an insertion of brass wire, cotton, etc., is wetted with a liquid lubricant prior to being machine knitted into gloves, belting, brake linings, packing rings, curtains, etc. The lubricant is preferably one which can be readily washed out, e. g. an aqueous solution of soap, glycerine, soda, and is applied in any known manner. Another dispersing use for soap is afforded by B. P. 495,263, which details a method of preparing aqueous dispersions of chloroprene, such as neoprene latex, by treating with soap, triethanolamine and other ingredients, which are commonly used in making adhesive compositions from natural rubber latex.

The paper industry is also heading toward using reasonable quantities of soap for certain specialized operations. Recent experiments have shown it to be excellent as a disintegration-inhibitor and in B. P. 485,700, it is recommended for use in the manufacture of a new starch sizing for paper pulp. The starch granules are swollen, but substantially nondisintegrated until when

viewed through crossed Nicols the crosses have disappeared in the bulk of the granules. The starch is then heated to 185° F. with the soap, dried and ground. In the production of new wrapping papers a pre-treatment with a suitable soap solution has been found useful. B. P. 494,521 states that wrapping paper can be treated to reduce its brittleness with an aqueous solution or suspension of a sulfonated fatty oil, e. g. sulfonated castor oil, or with an emulsion of a non-drying oil made up with castor or olive oil and soap. B. P. 492,608 covers a new method of waterproofing wrapping paper with a solution containing casein, soap and a metallic salt, e. g. sodium borate, drying, then treating it with a solution containing an aldehyde, e. g. formaldehyde and an organic acid and drying again. Pigment may be added to the casein-soap solution.

An entirely new process in leather manufacture is the impregnation of leather with colloidal graphite. The treated leather has the characteristics of graphite, such as grey luster, is unaffected by heat and exposure, has an improved resistance to moisture and possesses excellent electrical properties. Colloidal graphite is needed for the impregnation process and an aqueous solution made with olive oil soap can be sprayed, painted or used for soaking or dipping the leather. The soap not only acts as a vehicle for the graphite but lowers the surface tension of the interstices and facilitates rapid penetration and impregnation of the fibers.

Soap plays an important part in the preparation of several new insecticides and recent work in Australia by C. F. H. Jenkins, J. Dept. Agric. W. Australia, 1937, 14, 367-380, appears to indicate that phenolic soap is an effective control for the plague grasshopper. Soaps containing copper and arsenic naphthenates are useful for preserving jute and sisal and preventing the growth of injurious fungi. Emulsions made up of soap solutions containing lignasan, bordeaux mixture, creosote, etc., are

used for spraying pine logs so as to prevent the formation of ugly blue stains caused through the fungi, *Diplodia pinea*. Aqueous soap emulsions of cottonseed oil in which are suspended small quantities of copper oxide and mercuric oxide are also used in Holland for treatment of iridaceous and liliaceous bulbs.

The processes briefly described here show that soap is tending to play an expanding part in different industries owing to its unique physical properties, some of which have only recently been discovered. With the rapid strides being made in physical chemistry and their ever-widening application to industry, there is a distinct possibility that future uses of soap for other than detergent purposes may grow to proportions far beyond any anticipations of present-day practical soapers.

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The mixed soap system sodium palmitate-sodium laurate-sodium chloride has been studied at 90°C. The phase relations in the system were determined for 2 constant ratios of palmitate to laurate, and from these data the tetrahedral four-component diagram can be fairly well derived. The results indicate that the phase boundaries in the mixed soap system lie at concentrations intermediate between those found in the single soap systems, but are closer to the laurate than would be expected if salting-out effects were additive. James W. McBain, Robert D. Vold and Walter T. Jameson. J. Am. Chem. Soc. **61**, 30-7 (1939); through Chem. Abs.

The vapor pressure of aqueous sodium laurate was determined as a function of concentration. The existence of a waxy soap is confirmed. The activity of sodium palmitate and of sodium laurate is calculated for each phase. Models are described which represent qualitatively the experimental activity - concentration curves of middle soap and neat soap. Robert D. Vold and Marjorie J. Vold. Ibid. **61**, 37-44 (1939).

A 1939 View of the World FAT AND OIL SITUATION

By C. E. Lund*

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Commerce*

PRIOR to 1916, the United States were net exporters of fats and oils, but since then, with the exception of 1921 and 1924, have been net importers. For many years we have been importers of those fats and oils used in soap, paints, varnishes, linoleums, and lubricants. Prior to 1935, the United States was a substantial exporter of those fats and oils used principally for edible purposes. American yearly fat consumption (of which 40 to 45 per cent is lard and butter) has risen from 5 billion pounds some 25 years ago to over 9 billion at the present time. When it was only 5 billion pounds, we had a surplus to ship abroad and our net exports were nearly 600 million pounds. Domestic consumption was over 9 billion pounds in 1937, and net imports were two and one-half billion pounds. There was little change in the 1938 domestic consumption but imports decreased a billion pounds and were on a normal basis, being 14 per cent over the 10-year average, 1925-34, as against a 56 per cent increase in the three drouth years.

Imports in 1938 decreased from the high levels of the preceding three years principally because we produced more cottonseed, soybean, corn and peanut oils, and also more lard, butter and tallow. This increased production, plus heavier inventories entering 1938, met a lower

price level on all products in this group compared with the higher values of the preceding three years. The 1938 prices were, however, considerably above the low levels in the years immediately preceding 1934, following which drouth reduced domestic production and excise taxes affected the cost of imported products.

The record imports of 1937 increased 65 per cent over 1931 and the reported price of cottonseed to farmers advanced 118 per cent. Domestic economic conditions were, of course, vastly improved in the later year when our consumption of fats and oils increased 800 million pounds over the 1931 figure.

With an insufficient domestic production to supply the demand, the United States has been an exceptionally favorable market from a price, supply, and consuming standpoint for these imports since 1934. They included not only the familiar range of soap and paint oils, but a number not previously marketed here. The domestic producer found his product competing with others that he had never heard of and whose names he had difficulty in pronouncing.

It is said by proponents of increased import taxes that all fats and oils, including those not at all related to each other in their composition or ultimate uses, offer competition because their appearance on the market in volume has a depressing effect on the general price range. Another equally sincere group sug-

gest that we admit the lauric acid containing tropical oils free of all import taxes provided they are first denatured, so that they are available only for soap and other industrial uses, thereby relieving the pressure on the domestic edible field of these actual and potential competing supplies. This procedure, it is also claimed, would raise the world price level of the lauric acid containing oils and minimize their ability to compete with oils and fats which the United States exports to Europe.

Brazil has almost unlimited supplies of oil-bearing raw materials which have not been developed to the extent of their possibilities. Many grow wild in the interior, much of which is inaccessible because of lack of highways to ports. Production depends largely on world prices, availability of native labor, and crop conditions in their staple agricultural products. This refers particularly to the numerous varieties of the palm tree found in that country, rather than to cottonseed, the production and exports of which have been increasing rapidly in recent years, or to the castor bean which has for long been an important export.

Brazilian Oils

HERE are many millions of babassu palm trees in the interior of northern Brazil. Their nuts are of the hard, thick-shelled variety and the difficulties in removing the kernels and transporting them to ports are reflected by the fact that

* Extracts from address before Natl. Cottonseed Products Assn., New Orleans, May 10, 1939.

although they enjoy duty and tax free entry into the United States, our imports, which reached 30 thousand tons in 1936, have decreased to 25 tons in 1938. Of the babassu oil consumed in this country last year, 36 per cent entered margarine, 25 per cent went into soap, 3 per cent into shortening and 28 per cent into other edible products, such as specialty crackers and confections. This oil does not possess the shortening properties that make cottonseed oil a leader among vegetable oils in this field. It does, however, produce the free lathering soap that is characteristic of all lauric acid containing oils.

Among other varieties of the palm family abounding in Brazil and not included in our import tax legislation, several have recently been developed to some extent for export, principally to the United States. Our combined imports of Brazilian murumuru, urucum and tucum nuts and kernels totaled 10 thousand tons in 1937 and 4 thousand in 1938. All three of these oils are adaptable for use in edible products or soap. Other Brazilian vegetable oils arriving in this country are andiroba, a soap oil; ucuuba, used in the soap and candle industry; jaboty, a soap and medicinal product; and oiticica oil, the nearest known vegetable oil counterpart to Chinawood or tung oil.

Argentina, the world's leading beef exporter, contributes the tallow from this beef to the needs of other countries for fats. They supplied 25 per cent of our record tallow imports in 1935. These imports have been negligible following the adoption by Congress of an excise tax in 1936. Some 421 thousand tons of tallow were consumed in the United States last year, of which only 10 per cent was the edible grade, used in shortening. Inedible tallow, always the chief ingredient in soap, represented 48 per cent of all primary oils and fats used in that industry last year.

The main oilseed crops of the world are roughly estimated at over 50 million tons yearly. This, however, does not include olive oil and a num-

ber of miscellaneous oilseeds and nuts, on which complete production data are not available. Also, the production of butter, lard, and other animal, whale and fish oils is of course a major factor in world supplies.

The leading oilseed exports of the world are soybeans, linseed, peanuts, and copra, in that order. The annual world production of soybeans ranges between 12 and 15 million tons. China is the largest producer, but almost the whole of their output is consumed in that country, where it supplies a substantial, in not a major part of their diet. The production of China and Manchuria accounts for about 80 per cent of the world total.

The United States is the third largest producer of soybeans. Our domestic production, amounting to less than five million bushels in 1924, rose to 58 million bushels in 1938, which was about one-third the size of the Manchurian crop. The feature of the past season in the Southern States was the increase of over 11 per cent in the acreage of soybeans grown with corn and other crops, accompanied by an upturn in the acreage grazed and plowed under for soil improvement. The soybean crop seems to be well adapted to the Southern climate, which permits planting from February to August, and will make some hay either as a regular or as a summer catch crop following earlier crops. U. S. imports of soybeans and oil are now unimportant, while exports of the beans have been rapidly increasing from the larger domestic crops, reaching nearly 80 thousand tons last year.

Few, if any, other agricultural products have as wide a variety of uses. Soybean oil is used both in the food and paint industries, and when prices are low enough it is used in soap. There has been quite a shift in the use of soybean oil in the United States in recent years, the lard shortage increasing its use in the shortening and margarine industries. Last year 80 per cent of the amount consumed went into edible products,

4 per cent into soap and 6 per cent into paint and varnish.

The principal peanut producing countries are British India and China, the principal exporters, India and Africa, principal importers, France and Germany, and the principal countries producing the oil, France, Germany, China, the United Kingdom, and the Netherlands. Although more than two-thirds of the Indian crop are retained for domestic consumption, that country provides in most years about two-fifths of the peanuts (ground nuts) entering foreign trade. China and India together account for around 70 per cent of the total world production, but only 15 per cent of China's production is exported.

Coconut, Main Soap Oil

THE principal copra producers and exporters are the Netherlands Indies, the Philippine Islands, and British Malaya, the principal importers, the United States, Germany, and France, the principal producers of coconut oil, the Philippine Islands, the United States, Germany, and France, the exporters of the oil, the Philippine Islands, Ceylon, and British Malaya, and the principal importer of coconut oil is the United States. The world production of coconuts in terms of copra is probably something over three million tons a year.

The Netherlands Indies are the largest producers and exporters of copra, accounting for nearly two-fifths of the world total in recent years. However, the Philippine Islands ship nearly one-half of the coconut oil entering international trade, most of which goes to the United States. We average about one-fifth of the world's copra imports, over nine-tenths of which arrive from the Philippine Islands.

Coconut oil and the oil equivalent of imported copra are our heaviest import in the fats and oils field, amounting to as much as 36 per cent of all imports in this group in 1938, when the price was lower than competing products. Its prin-

cipal use in this country is in the manufacture of soap, where it follows tallow as the leading ingredient. Last year the soap industry absorbed two-thirds of the coconut oil consumed in factory operations, the rest going into edible products, of which 15 per cent entered shortening, 50 per cent margarine, and 35 per cent into other edible products, including fancy crackers, candies and other confections.

U. S. Palm Oil Buyer

THE oil palm is indigenous to tropical Africa, where this tree grows "wild." Cultivation is now carried on in an increasing scale by large estates in the Netherlands Indies and British Malaya, where plantations have been made with trees procured originally from Africa, and a high quality palm oil is produced, which is able to compete in the world market for edible oils. The Netherlands Indies, which supplanted British West Africa as the largest exporter after 1935, shipped abroad almost five times as much palm oil in 1938 as in 1930.

The United States and the United Kingdom are the principal markets for palm oil. In 1937 nearly three-quarters of the exports from the Netherlands Indies and two-fifths from the Belgian Congo were consigned to the United States. Our palm oil imports averaged 36 per cent of total recorded world imports in the years 1930-1937, inclusive.

This is our third heaviest import in the fats and oils group, following coconut oil (including the oil yield of copra) and linseed reduced to its oil equivalent. Palm oil is a leading source of hard, slow-lathering soaps. Textile manufacturers use large quantities of palm oil soaps, claiming that no other soap is suitable for certain purposes. Last year the factory consumption of palm oil was about 45 per cent each in shortening and soap, and 8 per cent in miscellaneous products, including tin plate.

British West Africa is the leading exporter of palm kernels, accounting for nearly half the world trade. Europe is practically the only market, the United States taking but 3 per cent of the 600 thousand tons yearly world imports. The United States is usually the largest importer of palm kernel oil, which is used for the same purposes as coconut oil.

Cottonseed and cottonseed oil exports usually follow palm kernels and palm oil in export trade. The principal countries producing the seed are the United States, British India, China, the Soviet Union, Brazil, and Egypt. The United States, by far the world's greatest producer of cottonseed oil, was in recent years the world's leading importer. British India and the Soviet Union consume most of their own production. Japan imports her cottonseed from China and is an important exporter of the oil, mostly to the United States in recent years. Egypt and Brazil are leading suppliers of cottonseed to the United Kingdom, who in turn are the leading exporters of the oil. Brazil now crush more of their seed, and have been an important source of our imports of this oil in the past few years.

World production of cottonseed has grown from an annual pre-war average of about 11 million tons to nearly 19 million tons in the 1937-38 season, the latter including the record 8½ million tons produced in the United States. Our production was 54 per cent of the world total in the five years preceding the World War, and 45 per cent in the 1937-38 season. We consume practically the entire domestic crop of cottonseed. Imports, while appreciable prior to 1927, have since been negligible. On the other hand, exports of this seed have been inconsequential since 1913. Since 1922 the United States has crushed from 75 to 80 per cent of its output of cottonseed and until 1922 found a ready market in Europe for much of its oil.

Cotton Oil,—90% for Food

U. S. production of cottonseed oil, which advanced to almost one million short tons in 1914, declined during the war and post-war periods and did not reach the 1914 level until 1927. In the five years 1928-1932 the production averaged 765 thousand tons, which declined to 632 thousand tons in the four years 1933-1936, due largely to the crop reduction program of the government, but in part also to weather conditions, particularly in Texas. The record 1937-1938 cotton crop, when acreage restrictions were removed, was followed by an 813 thousand ton oil production in 1937, and 842 thousand tons in the calendar year 1938, both of which were exceeded only in 1914 and 1927.

Relatively small quantities of cottonseed oil were imported during the war period, with imports since then unimportant until 1935. The marked increase in imports commencing in that year was due chiefly to short domestic supplies of lard, the increased production of vegetable shortenings, and, to some extent, to the excise taxes imposed on certain other imported oils in 1934 and 1936, with consequent price increases. Exports were quite important prior to 1922, being 178 thousand tons in 1912, and staying on a substantial basis until 1921, the Tariff Act of that year placing duties on imports of cottonseed oil and some other vegetable oils. The latter were then centered on Europe for a market, which in turn diminished the demand for American cottonseed oil exports. Imports of the oil were less than a thousand tons in 1921 and exports 127 thousand tons. Exports dropped to 39 thousand tons in 1922—imports remained negligible. Exports were thereafter on a generally downward trend to the present 2 thousand ton annual average. More than 90 per cent of our cotton oil factory consumption is for edible products, particularly for shortenings. In the manufacture of margarine, cottonseed

(Turn to Page 66)

MIXING

A brief discussion of mechanical mixing and the types of equipment best suited for various types of mixing operations

By C. R. Lockard

Sprout, Waldron & Company

MIXING in some phase generally enters into the production of all cleaning compounds, insecticide powders, sweeping compounds and allied products. It may involve mixing liquids with liquids; mixing solids with liquids or mixing solids with solids. In every case, the purpose is to combine two or more materials to obtain a product that has a uniform composition throughout the entire mass.

In this short discussion, we are going to concern ourselves primarily with the mixing of solids with solids and the mixing of solids with liquids. To discuss this problem intelligently, it is necessary to recognize the distinction between the term mixing and the term blending. Mixing is generally used to specify the uniform particle

distribution of two or more products into a mass without losing their individual identity. Blending is used to specify the action that takes place where two or more products are added to each other to form a product in which the separate ingredients have lost their identity. Thus, a sweeping compound consisting of sawdust, sand, etc., would be mixed, the ingredients would be uniformly distributed, but individual identities would not be lost. But in a powdered insecticide mixture where chemicals are extremely fine and requirements are for a uniform product at all times in both color and analysis the materials are blended together, losing their individual identity.

Mixing or plain particle distribution can be economically and effectively done in numerous types of

mixers. The most common is the double ribbon type horizontal mixer and the vertical cascade type unit. In the double-ribbon type, the agitator has an inside and outside ribbon that conveys the material in both directions within the case at equal speed, thus intimately commingling the different particles by the back-and-forth and over-and-under action this type of agitator gives. This type is also most effective for adding liquids to solids. Figure No. 1 illustrates a ribbon-type mixer.

Vertical mixers are becoming more and more popular for simple mixing operations. This is because they offer space- and power-saving economies, and generally eliminate the necessity of extra loading equipment. In this type of mixer the ingredients are dumped into a floor-level loading hopper and carried directly into the vertical screw that elevates it to the mixing chamber. Here it is elevated and cascaded off the top of the vertical agitator to fall to the bottom of the case. Thus, all the material is kept in a continuous motion that quickly results in a uniform mixing and particle distribution. Figure 2 shows a flow diagram of this type of mixer. This, as well as the mixer previously described, is of the batch type and is available in a wide range of capacity sizes.

Plant capacity is such, in some instances, to require a continuous mixing system. This usually consists of a specially designed double beater or pug-type mixer of sufficient length to permit proportioning feeders to be mounted thereon to feed the various ingredients into the mixing unit. Figure No. 3 illustrates a widely used continuous-type mixer.

Frequently, it is desired to add liquid to a premixed material. To do this requires a unit that will beat the material and liquid together in such a way that penetration is uniformly effected without lumping or balling of the material. A high speed continuous blender with specially hooked design heaters similar to Figure No. 4 provides this mixing action ideally.

Blending or particle assimilation is a more difficult operation than

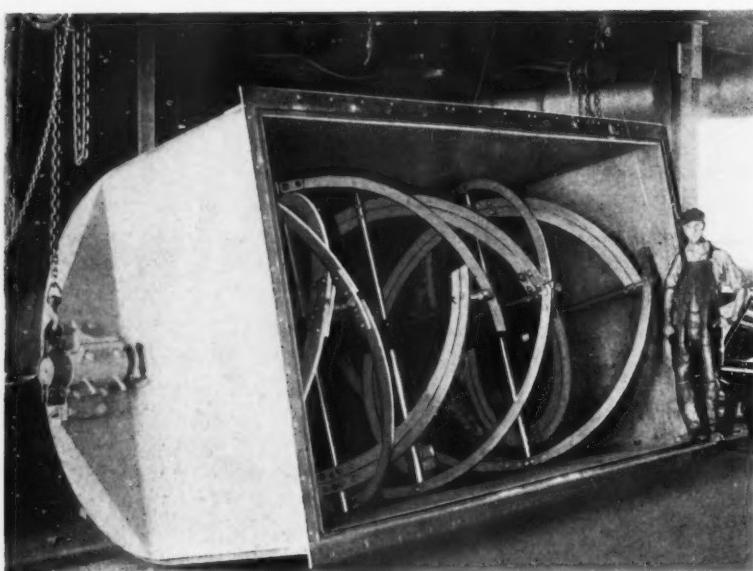


Fig. 1

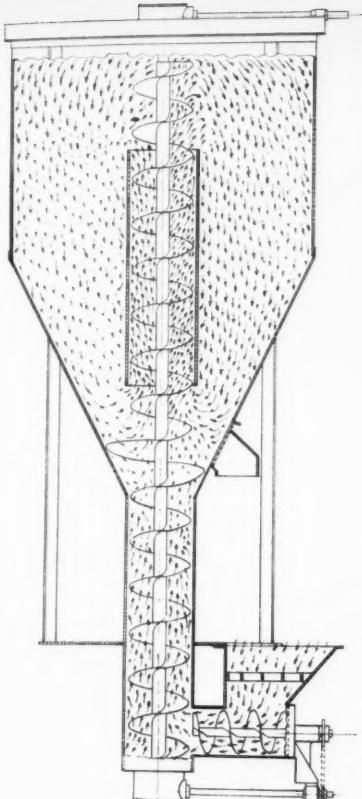


Fig. 2

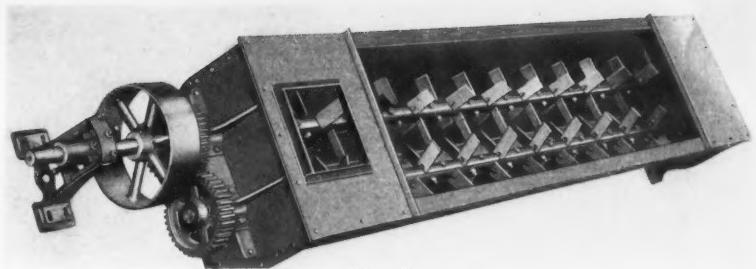


Fig. 3

this through a magnifying glass, if particles are extremely fine, will show that each is still in its original form. Take the material now and with an ordinary spatula lift it over a few times, giving it a rubbing or smoothing stroke on the paper. After a few such strokes you will find upon examination that the particles are

blended into each other forming a new product.

Figure No. 5 illustrates a type of mixing agitator that combines a ribbon and paddle construction. This agitator in rotation effects a particle distribution by the ribbon and at the same time gives the material a spatulating, blending action that effectively

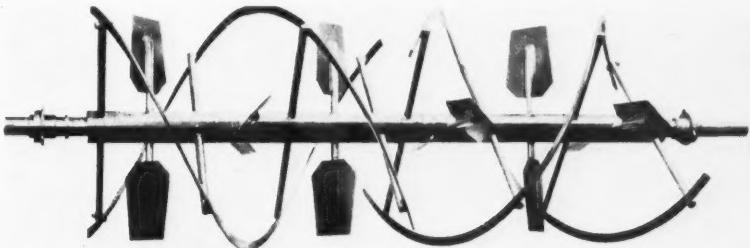


Fig. 5

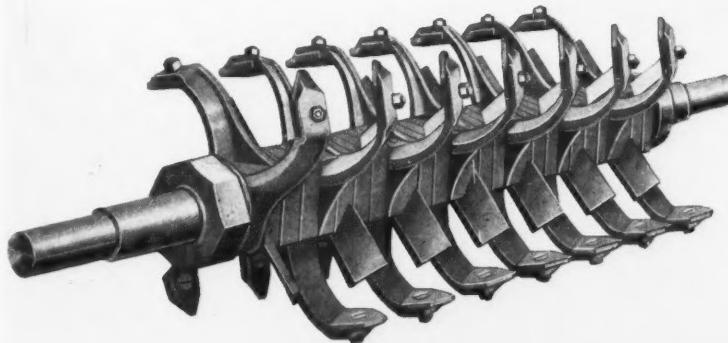


Fig. 4

particle distribution. To blend finely ground materials, it is necessary first to get uniform particle distribution and then a rubbing, smoothing action that co-mingles the particles so intimately that the combination results in a product in which no individual ingredient retains its identity. To illustrate the difference of a simple mixing and a blending action, take some of your product and place it on a paper, tilting it back and forth to get a rolling movement that will mingle the ingredients. Looking at

blends the two or more ingredients into a product where individual materials are combined to form a new product.

Some materials such as oxides and very finely ground materials need more vigorous treatment to insure absolute blending and color distribution. Where such is the case it is often recommended that the premixed mate-

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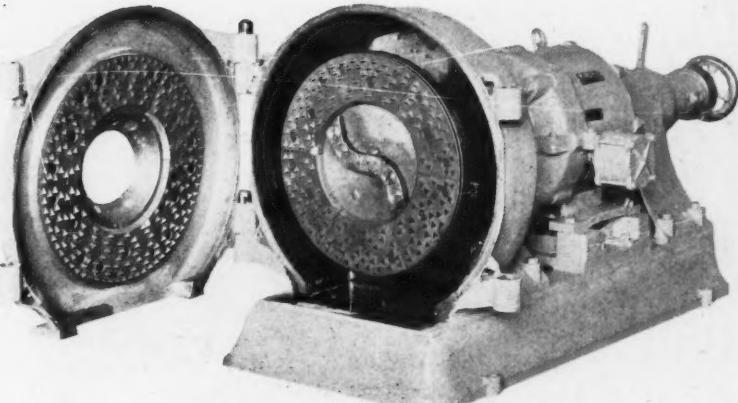
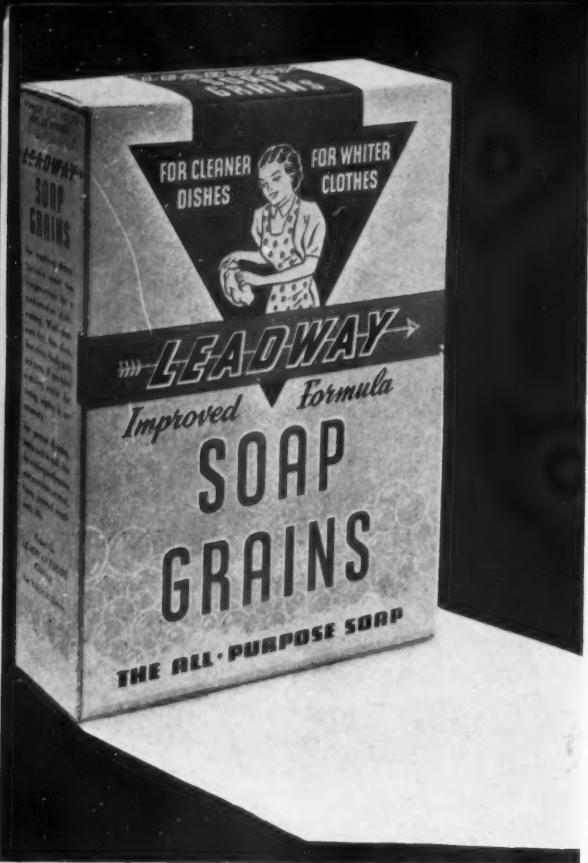


Fig. 6



In the redesigned package for "Leadway" soap grains, product of Leadway Foods, Inc., Chicago, punch out holes are provided on both sides of carton for handy pouring. Colors, red and yellow.

New Products

and



Linco Products Co., Chicago, is using a new private design Anchor closure for capping bottles of "Linco" hypochlorite bleach. Cap carries a self contained safety valve to minimize blowout danger.

The new top, now standard equipment on McCormick & Company's "Bee Brand" insect powder and flea powder, does double duty. Powder may be sprinkled or poured and the larger opening permits insertion of a teaspoon for filling insect powder guns.

Packages



E. Keller & Sons, Allentown, Pa., have just introduced a new liquid silver polish sold under the name "Tinsil." It is offered in an 8 oz. Owens-Illinois bottle.

Wilbert Products Co., New York, has introduced the glass jar to shoe polish packaging. Another move to gain the housewife's favor is the adoption of a "Quikseal" cap, easily removable without soiling the hands. Container supplied by Owens-Illinois.



The new "Bello-Box" for "Noze - Dyve" roach killer, product of Ludwig Wilson Co., Chicago, is a novel patented package which eliminates the necessity of using a separate powder gun. A blower spout to fit in top of the container is supplied.



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News....

Gillam Soap Works Addition

Gillam Soap Works, Fort Worth, Tex., have just completed a new one-hundred foot, two story addition to their plant. The addition was necessitated by increasing demand for the company's products, especially "Blue Bonnet" soap chips.

Bab-O Spring Campaign

B. T. Babbitt, Inc., New York, has launched a spring campaign, featuring a premium offer of a Cannon dish cloth, for "Bab-O" cleanser. During May, five hundred line insertions in 14 newspapers in the metropolitan area were used. Blackett-Sample-Hummert, New York, is the agency.

Wants Soap Agency

A firm in Havana, Cuba, is interested in establishing an agency for the sale of American made soaps. Further information may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1685.

Soap Company Leases Space

Shulton, Inc., soaps and toilet preparations, has taken approximately 73,000 square feet of space in the Factory Terminal, Hoboken, N. J. The company will discontinue its New York plant on 28th Street and carry on all activities at the new location.

German Soap Exports Down

Total exports of soap from Germany have declined steadily each year since 1930 with the exception of the year 1937 when there was a slight upturn. Exports of soap in 1930 amounted to 22,153 metric tons as compared to only 9,265 metric tons in 1938. Germany's exports of common soft soaps, liquid soaps and hard grained soaps have been well

maintained. The total decline, however, was due to the sharp decline in the exports of soap powder, soap flakes and toilet soap.



John Hanser, Jr., head of John Hanser Soap Co., Milwaukee, takes an inquiring taste from a package of "White Wonder Borax Soap Flakes" to make sure quality is up to standard. Mr. Hanser just completed his 20th year in the soap business.

Textile Chemists' Outing

The New York section of the American Association of Textile Chemists and Colorists will hold its annual outing and golf tournament at the North Jersey Country Club, Paterson, N. J., on June 16th. Featured, besides golf, will be tennis, horseshoes and a "Six Star" show. Harry R. Tisdale, American Dye-wood Co., New York, is chairman of the program committee.

Lever Outlook Optimistic

Francis D'Arcy Cooper, chairman of Lever Bros. and Unilever, Ltd., London, recently forecast for 1939 another year of approximately \$60,000,000 profits. Mr. Cooper made this prediction in his review of the company's trading in 1938, a year in which "peaceful and normal" conditions were absent, but in which the company earned an aggregate profit of \$61,100,000. Lever soap sales in 1938 amounted to 880,000 tons which surpasses the record 850,000 tons sold in 1937. Mr. Cooper stated that political disturbances are now influencing the Lever business less than formerly as the result of the policy of developing trade in other parts of the world where conditions are less troubled.

Attends Research Sessions

F. W. Blair, chemical director, Procter & Gamble Co., Ivorydale, O., recently returned from Washington, D. C., where he had attended the quarterly meeting of the Industrial Research Institute, of which he is a member of the executive committee.

Deny Canadian Excise Tax

The British Government has not only refused to allow Canada to impose the excise tax on vegetable oils proposed in this year's budget but has made it plain that any such move would have been regarded as a flagrant violation of the spirit of the 1937 Empire treaty. The proposed excise tax would have set a 2-cent a pound tax on the vegetable oil content in soap.

Foragers' Cocktail Party

The Foragers will hold a Cocktail Party at the Foragers' Club Room, Midtown House, New York, on June 14.

Bims of Boston Organized

The "Bims of Boston" was recently organized at Maison Lafayette, Boston. Martin Schultes, of Hewitt Soap Co., chairman of the "Bims," (New York) presented the Boston group with a charter for which they had applied. An executive committee was elected as follows: Robert C. Kelly, manufacturers' representative; Frank Langlois, United Drug Co., and Pete Niles, Fritzsche Bros. Members of the general committee are: George E. Esslinger, United Drug Co.; F. J. Hailer, United Drug Co.; Steve Higgins, Dennison Mfg. Co.; Pete Stengel, manufacturers' representative, Ralph Stewart, Boston Blacking & Chemical Co., and Martin F. Schultes, honorary member. According to tentative plans, the first golf party of the "Bims of Boston" will be held at the Commonwealth Country Club, Newton, Mass., June 22. The party will include a golf tournament and supper.

Wants Toothpaste Agency

A firm in London is interested in establishing an agency for the sale of American manufactured toothpaste. Further details may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1674.

Soap Employment Index Up

The employment index of the soap industry registered a gain in March, 1939. The figure was 90.5 as compared to 89.7 for February, 1939 and 89 for the 1938 March index. The payroll index also moved up with a figure of 92.7 for March, 1939 as compared to 91.2 for February, 1939 and 89.7 for March, 1938.

Chemical Salesmen Golf Dates

The Salesmen's Association of the American Chemical Industry has announced the following golf tournaments: Ridgewood Country Club, Ridgewood, N. J., June 15; Plandome Golf Club, Plandome, Long Island, July 11; Bonnie Briar Country Club, Larchmont, New York, August 15,

and Pomonok Country Club, Flushing, Long Island, the date of which has not yet been announced. B. F. Sheehan, Jr., chairman of the entertainment committee, announced that if the annual dues are paid up before the date of the first tournament and a member plays in that tournament, a free golf entry will be forthcoming in the August tournament.

Bobrick Buys Monmouth

Bobrick Manufacturing Corp., Los Angeles, and The Imperial Brass Manufacturing Co., Chicago, have purchased the soap dispenser department of Monmouth Products Co., Cleveland, the originators of the lather type soap dispenser. The purchase includes all parts and finished merchandise which the Monmouth company had on hand, good will, tools, patterns, dies, and four United States and Canadian basic patents covering lather soap dispensers. It has not yet been decided whether the Monmouth line will be continued or discontinued.

Magnus Help Reodorize Circus

Magnus, Mabee & Reynard, Inc., New York, supplied the Ringling Brothers-Barnum & Bailey Circus, with the odor for the theatre spray used during its recent performance at Madison Square Garden, New York.

Wants Toilet Soap Agency

A firm in Johannesburg, South Africa, is interested in establishing an agency for the sale of American manufactured toilet soap, wrapped and unwrapped. Further information may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1852.

U. S. Citronella Imports Up

Exports of citronella oil from the Netherlands Indies to the United States in 1938 amounted to 797 metric tons, the highest figure reported during the past ten years. This compared with 437 metric tons imported in 1937.

Cite "Calox" Ad Claims

McKesson & Robbins, Inc., Bridgeport, Conn., have been served by the Federal Trade Commission with a complaint alleging unfair trade practices in the sale of "Calox" tooth powder. In advertising this product, the company advised that "For teeth that shine like the stars, use Calox Powder," this slogan having been used in connection with pictures of popular movie stars. Through such advertising, the company is said to have falsely represented that movie stars have white, clear and sparkling teeth because they use "Calox" tooth powder; that "Calox" alone keeps their teeth in that condition, and that anyone who uses "Calox" can have teeth as beautiful as those of Hollywood's stars.

Chemists' Club Elects

Frederick M. Becket, Carbide & Carbon Chemicals Corp., was elected president of the Chemists' Club, New York, at its fortieth annual meeting held May 3. Other officers elected were: C. R. Downs, Weiss & Downs, Inc., resident vice-president; Gustav Egloff, Universal Oil Products Co., Chicago, non-resident vice-president; Cyril B. Clarke, American Cyanamid Co., suburban vice-president; Robert T. Baldwin, secretary, and Ira Vandewater, R. W. Greff & Co., treasurer. New trustees chosen were Ralph E. Dorland, Dow Chemical Co., and Thomas C. Oliver, consultant chemist.

New Soap Company

Thomas Neal, formerly with Heider Industrial Chemical Co. and John Hearin, have announced the forming of Neal-Hearin Soap & Chemical Co., 40 West Maple Street, Columbus, Ohio. The new company will deal in soaps, cleansers and janitor supplies.

Duke Laboratories Move

Duke Laboratories, Inc., have moved their offices and factory to new quarters at 375 Fairfield Avenue, Stamford, Conn. Carl J. Herzog is president of the company.

New Curran De-oil Product

The Curran Co., Malden, Mass., has produced a hydro oil and grease extractor for de-oiling and degreasing cement floors prior to painting. The extraction is said to remove grime, dirt and mineral oils from floors instantly. The new product is known as "Gunk Compound M-96" (phenolic type).

Certify Color Suppliers

Three leading suppliers of colors recently received the first certificates of purity of coal-tar colors issued by the U. S. Food and Drug Administration under the new Federal Food, Drug and Cosmetics Act. The new law prohibits the use of any coal-tar color in food, drugs or cosmetics unless it has been found to be harmless and suitable and has been certified by the Department as to purity. Those companies receiving the certificates were H. Kohnstamm & Co., New York, for D & C Yellow No. 1 Aluminum Lake; Calco Chemical Co., Bound Brook, N. J., for D & C Yellow No. 7; and Pylam Products Co., New York, for D & C Green No. 5. Certificates were also issued for additional batches of color; eight for the Calco company, two for the Pylam company and one for the Kohnstamm company.

F.T.C. La France Stipulation

General Foods Corp., New York, distributor of a laundering product "La France" has recently signed a stipulation with the Federal Trade Commission that it will discontinue representing that "La France" contains or constitutes a cleansing agent superior to or different from pure soap, and that if one uses "La France," clothes will not require any rubbing or scrubbing.

Oil Trades Sports Outing

The Oil Trades Association of New York has set June 13 as the date of its Spring sports outing to the Pelham Country Club, Pelham Manor, New York. Events of the day will include golf, baseball, swimming and bowling. The entertain-

ment committee arranging the outing is composed of Albert J. Squier, Squier-Sanderson Co., chairman; Clifford T. Weihman, Smith-Weihman Co.; J. F. Renick, Renick & Mahoney, Inc., and Joseph C. Smith, Smith-Weihman Co.

Camay Soap Stipulation

Procter & Gamble Co., Cincinnati, has entered into a stipulation with the Federal Trade Commission to discontinue advertising that the use of "Camay" soap will keep the skin young; that no other soap can compare with "Camay" for cleansing the skin, or that "Camay" reaches down to the pores. While not abandoning the right to claim that its product may be used safely upon sensitive skins generally, Procter & Gamble have agreed to stop representing that "Camay" "can't irritate the most sensitive skin."

Chiris Returns To France

Leon Antoine Chiris, chairman of the board, Antoine Chiris Co., perfuming materials, New York, and administrateur-delegue of Establishments Antoine Chiris, Grasse, France, sailed back to France on May 17, after a short visit in the United States. Mr. Chiris, who is also secretary of the French manufacturers of aromatic materials group, devoted much of his time, during his visit, to the French participation in the World's Fair.

Foragers Set Outing Date

The Foragers have set Saturday, June 24th, as the date of their outing to Great Captains Island in Long Island Sound, with the ship "Miralda" being chartered for the occasion by president Bert Georgi and his entertainment committee. The outing, in addition to races and a baseball game, will be featured by swimming, boating and shuffleboard.

Iowa Soap To Advertise

Iowa Soap Mfg. Co., Camden, N. J., has recently appointed Aitkin-Kynett Co., Philadelphia, to handle its advertising.

U. S. Soap Sales Gain

Sales of soaps during the first quarter of this year were 13.7 per cent above average quarterly sales for the four years 1935 to 1938 inclusive, according to figures released by the Association of American Soap and Glycerine Producers in its soap census tabulations. Soap sales for the first quarter of 1939 amounted to 698,337,086 lbs., valued at \$67,951,929, as against 571,235,877 lbs., valued at \$56,804,928 for the last quarter of 1938, and 675,656,009 lbs., valued at \$66,513,745 in the first quarter of 1938.

BIMS First Golf Outing

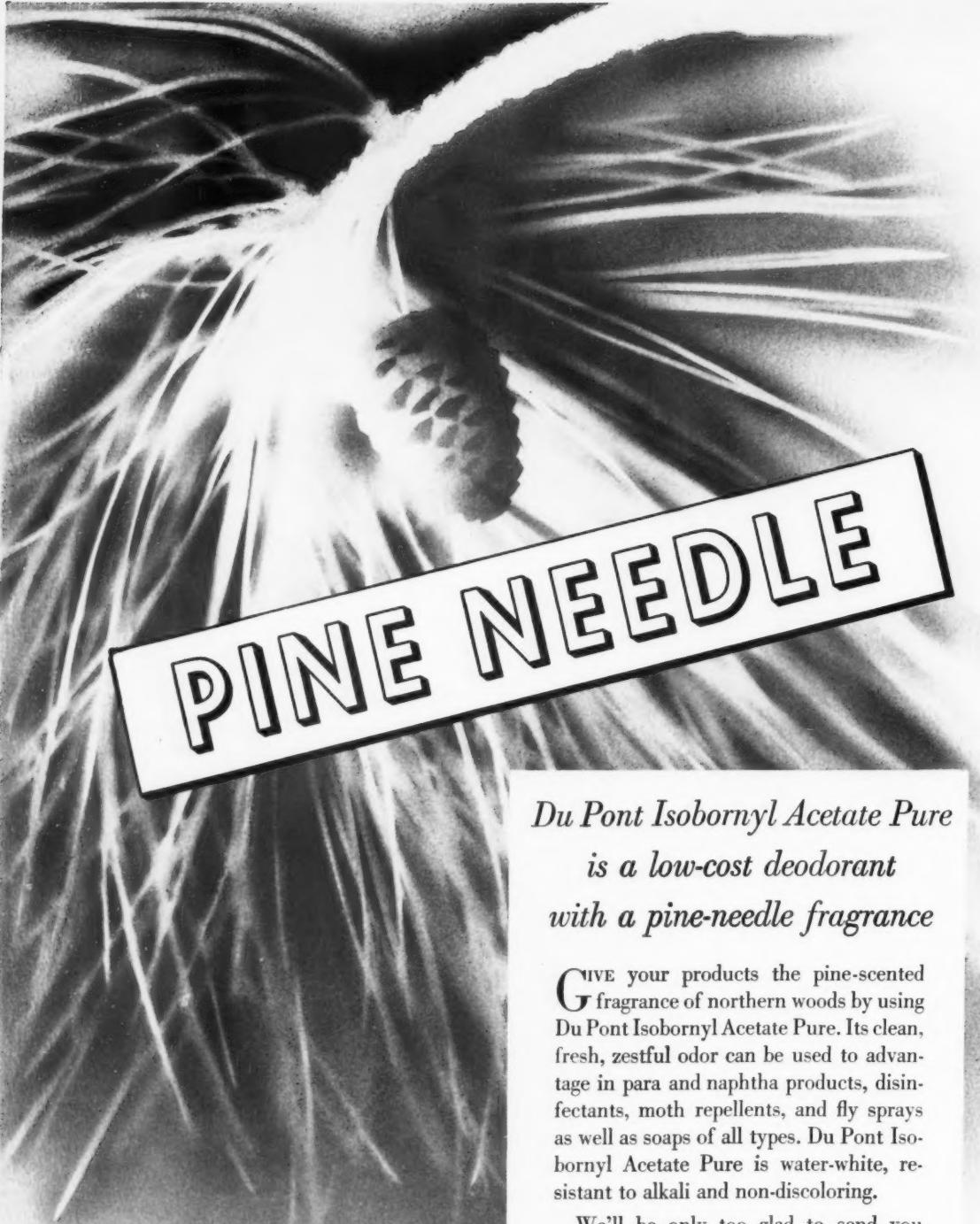
Over one hundred members and guests of BIMS gathered at the Canoe Brook Country Club, Summit, N. J., on May 11, for the season's first golf outing. More than eighty-five golfers posted their scores; many earning prizes through the committee's novel prize arrangement which put pro and dub on the same plane. The next outing is scheduled for June 13 at the Pomonok Country Club, Flushing, N. Y.

Skin Soap Stipulation

Plough, Inc., Memphis, Tenn., has recently entered into a stipulation with the Federal Trade Commission to discontinue representing that "Black and White" skin soap, which is sold by that company, will give quick relief from itching or skin irritations or be of value except as a germicide or to afford palliative relief.

Fritzsche Bros.' New Offices

Fritzsche Bros., Inc., New York, have recently established new branch offices in Cleveland and Cincinnati. James R. Eller will manage the Cincinnati office at 2306 Carew Tower, 5th and Vine Streets, and James F. Shumaker will be in charge of the Cleveland office at 1406 Standard Building, 1370 Ontario Street. Both men were formerly located at the company's Columbus office. It is not the present intention to carry stocks in the new branches.



PINE NEEDLE

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We'll be only too glad to send you samples and additional information regarding Du Pont's aromatic chemicals upon request. Write to-day to E. I. du Pont de Nemours & Co., Inc., Fine Chemicals Division, Wilmington, Del.



Aromatics

Senate Drops Oil Tax Repeal

Provisions of Senate Bill 2390 which would have involved removal of the processing tax on imports of denatured coconut oil from the Philippines were stricken out of the bill in a vote, May 31. The opposition to the change in the excise tax set-up was led by Senator Connally who made a point of order of the fact that the debated provisions dealt with revenues and must on a constitutional basis originate in the House.

The section of the bill dealing with repeal of the tax on denatured Philippine coconut oil, the Hayden amendment, had been adopted by unanimous vote of the Senate Insular Affairs Committee, and it was reported that a majority of the Senate was prepared to vote for the amendment on its merits. This points to the possibility that the House may include the amendment in such Philippine legislation as it may undertake to pass. Originating in this branch of Congress, such a measure would not be subject to opposition on constitutional grounds.

F. T. C. Issues Complaint

The Federal Trade Commission has served a complaint against Charles of the Ritz, Inc., and Charles of the Ritz Distributors Corp., cosmetics and toilet goods, New York, charging violation of the Robinson-Patman Act and Federal Trade Commission Acts. The corporations are said to favor certain retailers by furnishing them with the services of "demonstrators," without making similar services available to other competing purchasers on proportionally equal terms.

T.G.A. Re-elects Brooks

Herman L. Brooks, Coty, Inc., was re-elected president of the Toilet Goods Association at its fourth annual meeting at the Hotel Biltmore, New York, May 22 to 24. Other officers re-elected were: Cecil Smith, Yardley & Co., first vice-president; P. E. Hulbert, J. B. Williams Co., second vice-president; H. P. Willats, Colonial Dames, Inc., third vice-

president; Paul F. Vallee, Roger & Gallet, treasurer; J. I. Poses, A. A. Van Tine Products Corp., secretary, and Charles S. Welch, executive sec-



Herman L. Brooks

retary. A resolution which was approved at the meeting asked for the curbing of publicity over-emphasizing original complaints issued against toilet goods and drug manufacturers by the Federal Trade Commission. It was claimed that such publicity has the effect of convicting manufacturers for the alleged misdeeds before such conduct is proven true through hearings or further investigations. During the meeting, the association heard the annual report on its activities, by Mr. Brooks; a report on the Federal and State legislation affecting the cosmetic industry, by Hugo Mock, counsel to the association; and a resume of some of the aspects of the new Federal food, drug and cosmetic act, by H. Gregory Thomas, who is a new member of the executive board.

Syrian Soap Production

Soap production in Syria is concentrated in the hands of small firms according to a report received from the American Consulate General in Beirut. The Savonnerie Nationale, which was the first modern soap factory to operate in that country, has practically ceased operations, owing to distribution difficulties. A few foremen who were trained in the Savonnerie Nationale, however, have joined smaller organizations which are now producing soap.

Hidden Taxes on Soap

A full page advertisement appearing recently in Wisconsin newspapers cites 154 hidden taxes on soap. The advertisement, which was said to have been paid for by "citizens interested in public education on the subject of taxation," carried a list of twenty-five taxes paid by the soap manufacturer; thirteen of which are also paid by the farmer, twenty-one paid by oil refiners, eleven by transportation companies, twenty by producers of alkali, perfumes, etc., twenty-three by the wholesaler and twenty-one by the retailer. In addition to these there are other special taxes which swell the number to 154. Among the important taxes listed are: federal tax on imported oil, federal excise tax, federal income tax, federal unemployment tax, federal surplus tax on corporations, state income tax, state sales tax, state unemployment tax, etc.

J. A. Huisking to Fritzsché

Joseph A. Huisking, vice-president of Charles L. Huisking & Co., New York, in charge of the essential oil department of that firm for the past 27 years, and widely known throughout the drug, chemical and essential oil trades, on July 1, will become associated with Fritzsché Brothers, Inc., New York. Further details of Mr. Huisking's new connection will be announced later.

Frey Forms Oil Brokerage Co.

Edgar H. Frey, formerly of Frey & Horgan Corp., New York, has formed a new concern under the name of E. H. Frey Co. with offices in the New York Produce Exchange Annex. The new firm will do a brokerage business in vegetable oils, tallow and packing house by-products.

Wants American Soaps

A firm in Cairo, Egypt, is interested in establishing an agency for the sale of American made toilet soaps. Further details may be obtained by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1966.



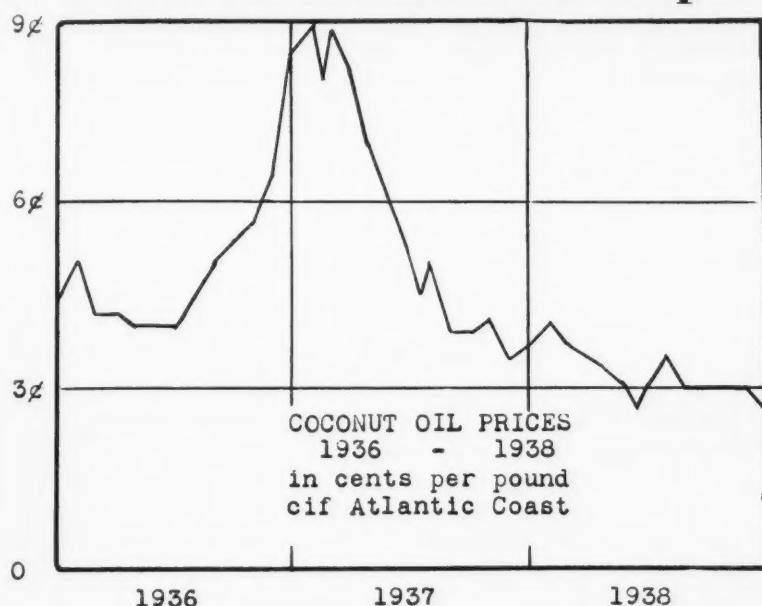
"But, darling, they insist that I go first—They say they've got only one net!"

Caution is the better part of valor—stick to
NIAGARA CAUSTIC SODA!

You'll always be safe with Niagara Caustic Potash and Carbonate of Potash, too.



Analyze 1938 Price Trend for Coconut Oil, Copra



THE year 1938 saw the lowest level of prices in the coconut oil market since 1934, the reasons for which are analyzed in a report just released by Leo Schnurmacher, Inc., Manila, P. I., coconut oil brokers. They point out that the year 1938 was one of contracting demand for imported oils in the United States due to the huge cottonseed oil production from the 1937-38 cotton crop and to the general business recession which followed upon the boom of 1936-37. This period of dwindling demand coincided with a considerably increased copra crop in the Philippine Islands. The supply and demand situation, thus greatly unbalanced, could be corrected only through falling prices and a resulting widening of the market for Philippine copra in Europe.

It may be assumed also, that it would not have been possible to maintain sales of coconut oil and copra to the United States in the volume which was actually reached, if the price of these raw materials

had not declined as much as it did.

According to the Schnurmacher report, the 1938 Philippine crop of copra totaled 799,568 metric tons as compared to the 1937 figure of 632,360 metric tons. Exports of coconut oil from the Philippines during 1938 amounted to 164,278 metric tons valued at P21,149.698, as compared with 163,868 metric tons in

1937, whose value was P41,734,286, or almost twice that of 1938. This readily emphasizes the lower prices which prevailed in 1938.

The outlook for 1939 is obscure, says the report. While the American markets suffer from an oversupply of lard, the European markets expect a decrease in the whale oil catch and a shortage in the olive oil crop in the Mediterranean basin. It is difficult to estimate whether the oversupply in the United States will influence European markets downward, or whether the indicated shortage in Europe will strengthen the American market. This, coupled with the gloomy political outlook in Europe, makes the outlook hazy.

Survey German Soap Use

The average wage earner family in Germany, consisting of 4.1 persons, consumes each year a total of 19.3 pounds of household soap, valued at 6.19 marks, according to an official survey of soap consumption conducted for the year 1937. The same family consumed 18.4 pounds of soap powders, 16.7 pounds of washing soda and 3.3 pounds of toilet soap. The survey revealed also, that the average consumption of soap per family rose with the total yearly income of the household.

Cites B. & O. Shampoo

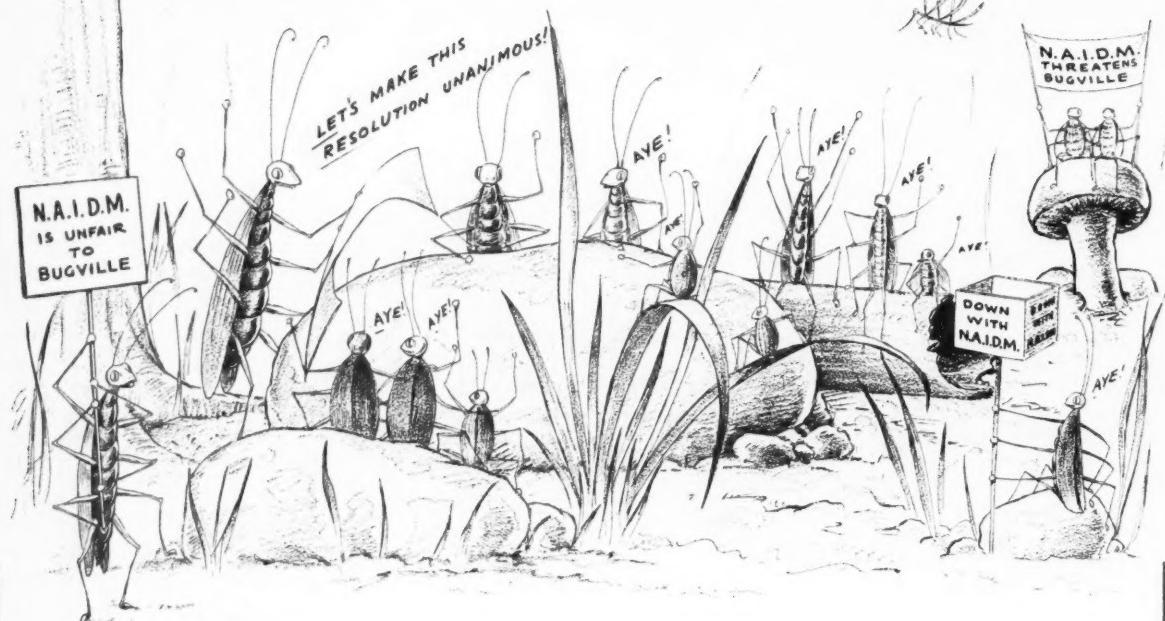
The Federal Trade Commission has issued a complaint against Buford & Owens College, charging them with misuse of the word "college" and misrepresentation in the advertising of hair and scalp remedies distributed by them. The advertising claimed that "B. & O. Hair Oil-Shampoo" stops the hair from falling out, cures many cases of scalp diseases, and causes stubborn hair to grow.

To Advertise Rex Cleaner

Waddell's Rex Product Co., Chicago, has announced a new advertising campaign to promote its "Rex" mineral cleaner. Coe, Guy & Walter, that city, will handle the account.

World Production of Copra (1937-1938)	
	Metric tons
Netherlands Indies	1,199,942 (1937)
Philippines	859,780 (1938)
British India	606,520 (1937)
Ceylon	370,640 (1937)
Malaya	261,820 (1937)
Other world production	607,441 (yearly average)
Total	3,906,143

BUGVILLE PROTESTS N.A.I.D.M. ACTIVITIES!..



"RESOLVED, that the N.A.I.D.M. is a constant threat to Bugville . . . that it is opposed, not only to our best interests, but to our very existence."

But the N.A.I.D.M.'s good work will go on in spite of Bugville's protest. And so will the good work of Fritzsche Brothers' laboratories in perfecting interesting new perfumes with which members of this association can make their products pleasanter and more salable.

And though we incur Bugville's displeasure in doing so, we invite N.A.I.D.M. members to sample some of the items in our new and enlarged line of insecticide and disinfectant perfumes. Write us for complete list or for specific types of odors. Let us demonstrate their remarkable covering power and very low cost.

"Fragrance Creates Sales Appeal"

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.
FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE



A *Fritzsche* PRODUCT for EVERY PURPOSE . . .

• ESSENTIAL OILS

Your basic materials should be the finest that modern methods and scientific skill can produce. In using FRITZSCHE'S Essential Oils you are assured matchless purity and dependability.

• AROMATIC CHEMICALS

Large selection and superlative quality characterize the materials in this group. Use them for finer aromatic effects and for greater economy.

• FIXATIVES

We carry a complete line of fixatives, including Rose Crystals, one of the best all-around fixatives, also a group of Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris—especially adaptable to soap making.

• ANTI-OXIDANTS

These recently developed preservatives for soaps, animal and vegetable fats and oils are highly important to the soap manufacturer. Write us for full details concerning Oxidex.

• BATH SALT PERFUMES

Combining perfume and color, our delightful Bath Perfumes greatly simplify and facilitate the process of manufacture. Very economical. Complete information and list of blends will be sent upon request.

• INSECTICIDES AND DISINFECTANTS

Note our advertisement on opposite page—then investigate our improved line of odors. Each item in this group embodies the latest advances in scientific perfuming.

• DEODORIZING COMPOUNDS

Technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., require good, dependable deodorizing compounds in their formulae. For effective, low cost coverage we offer and recommend in addition to Neutroleum—Safrella, Javollal, Methalate "C", and others.

• TOILET SOAP COMPOUNDS

Perfumes in this group have been specially prepared to meet the exacting demands of soap manufacture. Exquisite scents at a minimum cost. Consult our catalog.

• LIQUID SOAP AND SHAMPOO PERFUMES

These perfumes are highly soluble and mix readily with liquid soaps. Simple to use, cost limits and strength of odor desired determine quantity required.

• DENTAL AND ORAL FLAVORS

These flavors are of a special character, skillfully blended to impart pleasant, clean, refreshing taste effects. We are prepared also to create special flavor blends according to your specifications and for your exclusive use. Consult us freely.

• SOAP COLORS

We supply soap colors to produce any desired tint. Send us description or sample of color to be matched for our specific recommendations.

SEND FOR SAMPLES

National Market for Teel

Procter & Gamble Co., Cincinnati, has recently set up an extensive schedule for newspapers, radio and magazines in order to promote its new liquid dentifrice, "Teel," in the national market. These media will be assisted by the sampling which has already taken place in Chicago, Milwaukee, Madison and Peoria. In Chicago, "Teel" is said to have climbed into fourth place in popular favor. The Procter & Gamble Company has also announced a dealer premium of one 25-cent and one 50-cent bottle with every dozen initial order. The product is price-protected at 10, 23 and 39 cents. The account is handled by H. W. Kastor & Sons Advertising Co., Chicago.

Chicago Drug Chemical Party

The annual spring dinner dance of the Chicago Drug and Chemical Association was held on May 13th in the Grand Ball Room of the Palmer House. A record crowd was on hand to enjoy the dinner, dancing and floor show. The entertainment committee functioned under the leadership of vice-president, Charles L. Drum.

F.T.C. Cites Coty Products

The Federal Trade Commission has charged Elizabeth Arden, Inc., New York, and Coty, Inc., Wilmington, Del., with violations of the Federal Trade Commission and Robinson-Patman Acts by furnishing the services of demonstrators of their products to certain retailers. The Elizabeth Arden company was further charged with price discrimination by allowing certain purchasers price discounts from retail or list prices more favorable than those granted to others.

Wants Toilet Soap Agency

A firm in London would like to conduct an agency for the sale of American manufactured toilet soaps. Details may be obtained by writing to the Bureau of Foreign and Domestic Commerce, referring to File No. 1674.



"**E**very once in a while someone's sales jump ahead the same way, because of a better package. In this case it was a vacuum key can; another time it may be a new development in fibre. The point is that it's usually an American Can customer . . . and even if our product *is* different, it's an asset to us to have on *our* team the people who *do* develop packaging ideas that click."

CANCO

AMERICAN CAN COMPANY, 250 PARK AVENUE, NEW YORK, N. Y.

Contracts Awarded

Jeffersonville Soap Awards

The following contracts were awarded in a recent opening by the U. S. Army Quartermaster at Jeffersonville, Ind.: 6,000 cakes soap at 2.55c to Day & Frick, Philadelphia; 10,000 cakes soap at 1.9c to the same company; 300,000 lbs. laundry soap at 3.23c to Colgate-Palmolive-Peet Co., Jersey City, N. J.; 3,000 cakes toilet soap at .83c to Iowa Soap Co., Burlington, Iowa, and 3,000 lbs. soap chips at 5.12c to Procter & Gamble Distributing Co., Cincinnati.

Brooklyn Soap Awards

Kranich Soap Co., Brooklyn, was awarded the contract on 12,000 lbs. castile soap at 6.9c in a recent opening by the U. S. Army Quartermaster at Brooklyn. In the same opening R. M. Hollingshead Corp., Camden, was awarded the contract on 12,000 lbs. saddle soap at 8.8c.

Disinfectant and Soap Bids

Harley Soap Co., Philadelphia, submitted the low bid of 40c on 2,200 gals. disinfectants in a recent opening by the Treasury Procurement Supply at Washington, D. C. At the same opening, Cole Chemical Co., Long Island City, N. Y. was low bidder on 8,250 gals. soap at 15.75c, and Armour & Co., Chicago, was low on 4,550 gals. soap at 8.44c.

Jeffersonville Soap Awards

Hunnewell Soap Co., Cincinnati, was awarded the contract on 40,000 cakes grit soap at 2.1c a cake in a recent opening by the Army Quartermaster at Jeffersonville, Ind. At the same opening, Colgate-Palmolive-Peet Co., Jersey City, was awarded the contract on 600,000 lbs. laundry soap at 3.19c a lb.

Soap Dispenser Bid

Palmer Products, Waukesha, Wis., submitted the low bid of \$148.80 on 96 liquid soap dispensers

in a recent opening by the Panama Canal Supply at Washington, D. C.

Post Office Cleaner Award

R. M. Hollingshead Corp., Camden, N. J., was awarded the contract on 4,000 gals. cleaner and renovator at 45c in a recent opening by the Post Office Supply at Washington, D. C.

Post Office Soap Award

Kirkman & Son, Brooklyn, was awarded the contract on 29,000 lbs. soap at 5.83c in a recent opening by the Post Office Supply at Washington, D. C.

Trisodium Phosphate Bid

Interboro Chemical Co., New York, bid low on 816 pkgs. trisodium phosphate at 4.6c in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Washington Soap Bid

Colgate-Palmolive-Peet Co., Jersey City, N. J., submitted the low bid of 6.106c on 60,000 lbs. soap in a recent opening by the Treasury Procurement Supply at Washington, D. C. At a more recent opening by the same department, Los Angeles Soap Co., Los Angeles, submitted the low bid of 5.9c on 6,750 lbs. grit soap and Dixie Janitor Supply Co., bid low on 360 lbs. tar soap at 13c.

Treasury Soap Bids

Harley Soap Co., Philadelphia, submitted the low bid of 3.99c on 1,500 lbs. automobile soap in a recent opening by the Treasury Procurement Supply at Washington, D. C. At the same opening, Unity Sanitary Supply Co., New York, bid low on 4,032 lbs. powder soap at 2.2c.

Scouring Soap Bid

Du Bois Soap Co., Cincinnati, submitted the low bids on the follow-

ing in a recent opening by the Post Office Supply at Washington, D. C. On 1,040 bbls. scouring soap, 1.61c; on 434 bbls. scouring soap, 1.98c; and on 143 bbls. scouring soap, 2.53c.

Automobile Soap Bids

R. M. Hollingshead Corp., Camden, N. J., submitted the low bids of 5.25c on 70 10-lb. cans and 3.75c on 60 50-lb. cans of automobile soap in a recent opening by the Post Office Supply at Washington, D. C.

Post Office Polish Bid

Cole Chemical Corp., Long Island City, N. Y., submitted the low bid of 26c on 5,000 gals. liquid polish in a recent opening by the Post Office Supply Department at Washington, D. C.

Floor Wax Bid

Waxaid Co., Baltimore, submitted the low bid of 37.49c on 500 gals. floor wax in a recent opening by the Post Office Supply Department at Washington, D. C.

Trisodium Phosphate Bid

American Soap and Washoline Co., Cohoes, N. Y., submitted the low bid of 2.72c on 816 packages trisodium phosphate in a recent opening by the Treasury Procurement Supply at Washington, D. C.

Metal Polish Bid

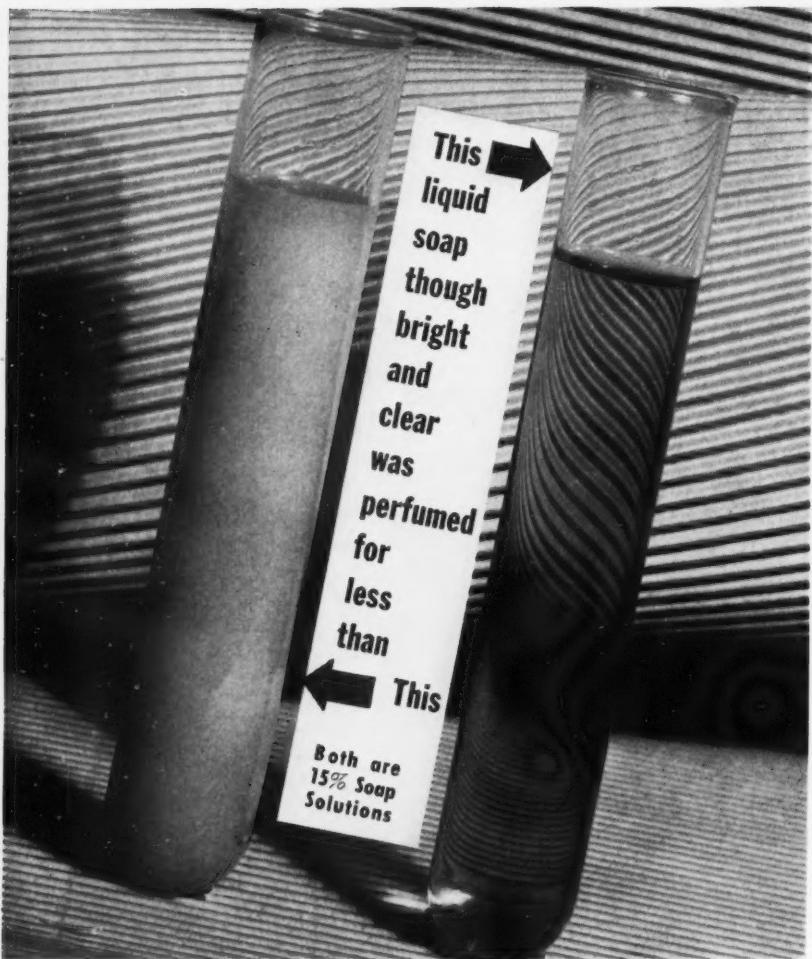
Waxaid Co., Baltimore, submitted the low bid of \$230.40 on 2,880 cans liquid metal polish in a recent opening by the Panama Canal Supply at Washington, D. C.

Floor Wax Bid

R. M. Hollingshead Corp., Camden, N. J., was low bidder on 2,000 lbs. floor wax at \$152 in a recent opening by the Panama Canal Supply at Washington, D. C.

Treasury Soap Award

Sterling Supply Corp., Philadelphia, was awarded the contract on 64,500 lbs. soap at \$5.61 cwt. in a recent opening by the Treasury Procurement Supply at Washington, D. C.



What Every Liquid Soap Manufacturer Should Know -about MM&R "L.S." Perfume Oils

The camera shows what the laboratory proves—

1. In a soap solution, (even as dilute as 15%), M M & R "L.S." Perfume Oils dissolve clearly without filtration and permit the liquid soap to remain sparklingly bright, crystal clear, and glass-like in transparency.
2. It actually costs less than 1/10 cent to perfume a gallon of liquid soap (soap-less shampoo, etc.) if you use M M & R "L.S." Perfume Oils.
3. The use of M M & R "L.S." perfumes results in liquid soaps that look better, smell better,—cost less and sell faster!

M M & R **PERFUME OIL BLUEBELL L.S.** A refreshing odor.
 "L. S." **PERFUME OIL ORANGE BLOSSOM L.S.** Fragrant and flowery.
 Perfume **PERFUME OIL ROSE BLEUE L.S.** Delicate, different.
 Oils **PERFUME OIL LILAS VEGETAL L.S.** Aristocratic lilac.
 PERFUME OIL LILAS BLANC L.S. Masculine odor.
 PERFUME OIL TI-TREE L.S. Strongly germicidal odor.

For a limited time, we will ship a pound of any of the above "L. S." odors (regularly \$2.25) at the 100 lb. price . . \$1.80



MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS

AROMATIC CHEMICALS, ETC., SINCE 1895

16 DESBROSSES ST.



NEW YORK, N. Y.

Offices and Warehouses in Chicago at 180 N. WACKER DRIVE • In CANADA—RICHARDSON AGENCIES, Ltd., Toronto

New Trade Marks

The following trade-marks were published in the May issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

GRABO—This in solid letters describing liquid cleaning agent. Filed by Grabo Chemical Co., Grand Rapids, Mich., Feb. 6, 1939. Claims use since Jan. 1933.

MEDLEX—This in solid letters describing soaps, polishes and cleansers. Filed by Industrial Soap Co., St. Louis, Feb. 8, 1939. Claims use since Jan. 25, 1939.

UNION—This in solid letters describing metal polish. Filed by Union Oil Company of California, Los Angeles, Feb. 27, 1939. Claims use since Sept. 1, 1931.

NUIT D'EXTASE—This in solid letters describing soaps. Filed by Parfumerie Roger Et Gallet, Societe Anonyme, Paris, March 1, 1939. Claims use since Aug. 1938.

SPONJOL—This in solid letters describing laundry detergents. Filed by Clarence M. Cobb, Boston, March 9, 1939. Claims use since Feb. 28, 1939.

FLAROMA—This in script letters describing toilet soaps. Filed by John J. Tracey Co., Chicago, March 13, 1939. Claims use since Oct. 26, 1938.

DIHYDROLIN—This in stenciled letters describing insecticidal concentrates. Filed by Whitmire Research Corp., St. Louis, March 15, 1939. Claims use since Feb. 15, 1939.

SALON—This in script letters beneath figure of lady's face, describing soap. Filed by United Cigar-Whelan Stores, Inc., New York, Nov. 8, 1938. Claims use since July 15, 1937.

HEIRLOOM—This in fancy letters describing soap powder. Filed by Lightfoot Schultz Co., New York, Feb. 7, 1939. Claims use since Jan. 17, 1939.

HERITAGE—This in solid letters describing soap powder. Filed by Lightfoot Schultz Co., New York, Feb. 7, 1939. Claims use since Jan. 17, 1939.

ABSOLUTE—This in solid letters above portrait of woman, describing hair shampoo. Filed by The Absolute Co., Ottumwa, Iowa, Nov. 28, 1938. Claims use since Nov. 8, 1938.

UNION—This in solid letters describing waxes. Filed by Union Oil Company of California, Los Angeles, Feb. 27, 1939. Claims use since June 8, 1938.

PRO-TEX-SIL—This in solid letters in verticle position, describing polishing compound for silver. Filed by Welmaid Corp., Chicago, March 11, 1939. Claims use since March 11, 1938.

LOOMKILL—This in solid letters within oval describing insecticide. Filed by W. H. Loomis Talc Corp., Gouverneur, N. Y., March 8, 1939. Claims use since Feb. 25, 1938.

HALL STAR—This in solid letters underneath star, describing anti-septic shampoo. Filed by Hallstar Products, Inc., Scarsdale, N. Y., March 9, 1939. Claims use since December, 1938.

JAPEX—This in solid letters describing insecticide. Filed by Lethelin Products Co., Wood-Ridge, N. J., March 10, 1939. Claims use since Jan. 10, 1939.

GUST MANTOS—This in small script letters written beneath portrait of the applicant. Filed by Gust Mantos, San Francisco, March 13, 1939. Claims use since Aug. 15, 1938.

RENAVENE—This in solid letters describing polish and cleaner. Filed by Ralph E. Inson, New York, Jan. 20, 1939. Claims use since March 6, 1936.

RYD.RIZE—This in solid letters describing polishes and waxes. Filed by Reliable Sales Co., Hartford, Conn., Jan. 26, 1939. Claims use since June 1, 1935.

FOUR DUCES—This in solid letters with four figure twos between the two words, describing automobile polish. Filed by Bennett Chemical Co., Cambridge, Md., March 23, 1939. Claims use since Feb. 24, 1939.

EARLY AMERICAN OLD SPICE—This with "Early American" in solid letters above "Old Spice" in script letters, describing soaps. Filed by Shulton, Inc., New York, July 2, 1938. Claims use since April 2, 1937.

SURFAX—This in stenciled letters describing cleansers. Filed by E. F. Houghton & Co., Philadelphia, Feb. 4, 1939. Claims use since May 16, 1938.

DICOLOID—This in solid letters describing cleanser. Filed by The Diversey Corp., Chicago, March 1, 1939. Claims use since Jan. 11, 1939.

BENEDETTO—This in script letters beneath figure of bird, describing soaps. Filed by Supreme Olive Oil Corp., San Fernando, Calif., March 3, 1939. Claims use since Feb. 24, 1939.

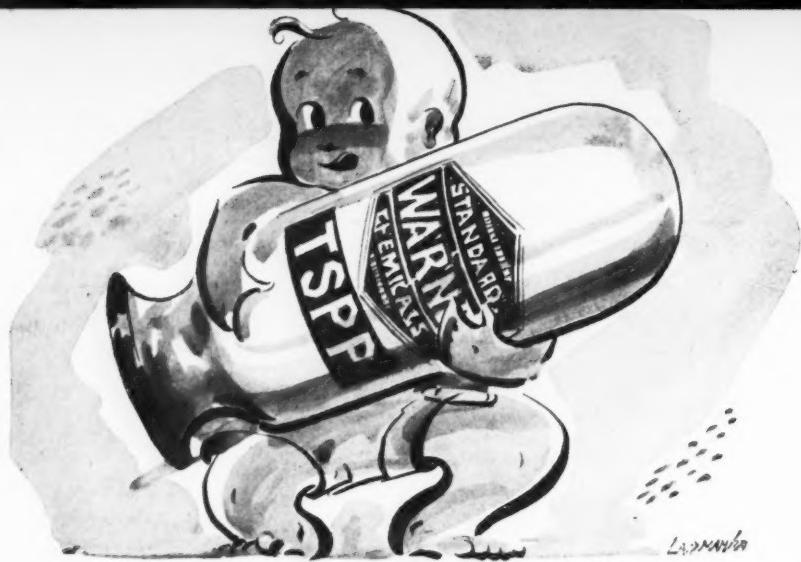
STA-BAC—This in outline letters describing hair dressing preparation. Filed by Vi-Jon Laboratories, Inc., St. Louis. Claims use since April 15, 1921.

SPARKOL—This in solid letters describing shampoo. Filed by Sparkol Co., New York, March 20, 1939. Claims use since Dec. 6, 1933.

MEDOL—This in stenciled letters describing insecticidal preparations. Filed by Shell Oil Co., San Francisco, March 21, 1939. Claims use since May 1, 1938.

MEDONA—This in stenciled letters describing insecticides. Filed by Shell Oil Co., San Francisco, March 21, 1939. Claims use since May 1, 1938.

VAPONA—This in stenciled letters describing insecticides. Filed by Shell Oil Co., San Francisco, March 21, 1939. Claims use since May 1, 1938.



L. Mervin

Chemistry's LUSTIEST Baby—TSPP

Five decades old in textbook theory—five years old in commercial quantity production—the use of Tetra Sodium Pyrophosphate has increased a hundred-fold in the past two years.

This seemingly overnight growth of TSPP in soap and detergent mixes has not found Warner unprepared. As pioneer producers of phosphates in America, Warner had pilot plant production of TSPP almost 10 years ago—was making carload shipments of TSPP over 5 years ago.

Today, we have ample capacity to serve your present and future needs PLUS a solid background of production and technical experience on this "new" phosphate.

We will welcome the opportunity to guide you in the choice of phosphates for your products. Your inquiry for prices, samples or technical data on our several grades of Mono, Di, Tri or Tetra Sodium Pyrophosphate will involve no obligation and will receive prompt attention.

OTHER WARNER CHEMICALS

Carbon Tetrachloride, 99.995% Pure	
Carbon Bisulfide	Chlorine
Magnesium Oxides	Sodium Sulfide
Blanc Fixe	Caustic Soda
Barium Carbonate	Caustic Potash
Barium Hydrate	Epsom Salt
Barium Oxide	Hydrogen Peroxide
Barium Peroxide	Alumina Hydrate, Light

WARNER
CHEMICAL COMPANY ☆ DIVISION OF

WESTVACO CHLORINE PRODUCTS CORPORATION

GLAZEEN—This in solid letters describing hair preparation. Filed by Eugene Fingerlin, Tulsa, Okla., April 10, 1939. Claims use since May, 1938.

BUB'LETS—This in solid letters describing water softener. Filed by Charles D. Farmer, Detroit, April 11, 1939. Claims use since Feb. 2, 1939.

LA PRESTO—This in outline letters amid figures of bubbles, describing hair tonic. Filed by La Presto Co., Williamsport, Pa., April 12, 1939. Claims use since July 1, 1938.

D AND A—This in letters in relief, describing insecticides. Filed by The National Broom Mfg. Co., Pueblo, Colo., April 17, 1939. Claims use since Jan. 1, 1939.

Trade Marks Granted

366,395. Cleaning and Polishing Compound. Pierpont & Grow Products, Muncie, Ind. Filed October 18, 1938. Serial No. 411,752. Published January 17, 1939. Class 4.

366,405. Fertilizers. General Chemical Co., New York. Filed October 28, 1938. Serial No. 412,131. Published January 17, 1939. Class 10.

366,409. Soap Compounds. Lightfoot Schultz Co., New York. Filed October 29, 1938. Serial No. 412,191. Published January 31, 1939. Class 4.

366,411. Toilet Soap. Colgate-Palmolive-Peet Co., Jersey City, N. J. Filed November 2, 1938. Serial No. 412,289. Published January 10, 1939. Class 4.

366,425. Cleaning Preparation. Morris L. Tanner, Chicago. Filed November 8, 1938. Serial No. 412,528. Published January 10, 1939. Class 4.

366,431. Detergent. Calgon, Inc., Pittsburgh. Filed November 12, 1938. Serial No. 412,626. Published January 10, 1939. Class 4.

366,432. Polishes. Tuners Supply Co., Somerville, Mass. Filed November 12, 1938. Serial No. 412,671. Published January 31, 1939. Class 16.

366,469. Cleaning Preparation. Carl R. Van Zile, Warsaw, Ill. Filed November 25, 1938. Serial No.

413,163. Published January 31, 1939. Class 4.

366,482. Cleanser. The Divorse Corp., Chicago. Filed December 3, 1938. Serial No. 413,436. Published January 24, 1939. Class 4.

366,488. Cleaning Preparation. Gulden Co., Jersey City, N. J. Filed December 15, 1938. Serial No. 413,867. Published January 31, 1939. Class 4.

366,515. Cleanser. B. T. Abbott, Inc., New York. Filed May 28, 1937. Serial No. 393,361. Published February 7, 1939. Class 4.

366,538. Cleaning Preparation. Rockwell Laboratory, Kansas City, Filed October 3, 1938. Serial No. 411,261. Published January 31, 1939. Class 4.

366,548. Scouring Paste. The Sic Em Mfg. Co., Norwalk, Conn. Filed October 26, 1938. Serial No. 412,053. Published February 7, 1939. Class 4.

366,566. Paint Cleaners and Cleaning Fluids. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed November 25, 1938. Serial No. 413,118. Published February 7, 1939. Class 4.

366,637. Soap. James A. Smith, Philadelphia. Filed March 28, 1938. Serial No. 404,587. Published May 17, 1938. Class 4.

366,639. Paint Cleaner. Bravo Products Co., Ann Arbor, Mich. Filed May 21, 1938. Serial No. 406,577. Published February 14, 1939. Class 4.

366,662. Liquid Glass Cleaner. S. H. Kress and Co., New York. Filed

October 29, 1938. Serial No. 412,189. Published February 14, 1939. Class 4.

366,667. Shaving Cream. Shulton, Inc., New York. Filed November 12, 1938. Serial No. 412,676. Published February 14, 1939. Class 4.

366,669. Glass Cleaner. Paragon Oil Co., Inc., Brooklyn, N. Y. Filed November 14, 1938. Serial No. 412,729. Published February 14, 1939. Class 4.

366,681. Cleanser. Du Bois Soap Co., Cincinnati. Filed November 23, 1938. Serial No. 413,065. Published February 14, 1939. Class 4.

366,682. Cleansing Preparations. MacDermid, Inc., Waterbury, Conn. Filed November 23, 1938. Serial No. 413,075. Published February 14, 1939. Class 4.

366,694. Cleanser. Fitzpatrick Bros., Inc., Chicago. Filed December 1, 1938. Serial No. 413,340. Published February 14, 1939. Class 4.

366,794. Insecticides. Gesellschaft für Neuzeitliche Bodenbehandlung m. b. H., Naaki-Vertrieb, Neu- brandenburg and Berlin, Germany. Filed March 30, 1938. Serial No. 404,646. Published Feb. 7, 1939. Class 6.

366,795. Insecticide. James A. Smith, Philadelphia, Pa. Filed March 28, 1938. Serial No. 404,586. Published May 31, 1938. Class 6.

366,797. Hair Preparations. Samuel I. Marks, Chicago, Ill. Filed May 14, 1938. Serial No. 406,343. Published Feb. 14, 1939. Class 6.

366,809. Roach Paste. Hom- Protector Co., Savannah, Ga. Filed Sept. 15, 1938. Serial No. 410,585. Published Feb. 7, 1939. Class 6.

366,813. Hair Tonic. Paul Westphal Inc., New York. Filed Sept. 17, 1938. Serial No. 410,713. Published Feb. 14, 1939. Class 6.

366,860. Insecticides. Andrew Wilson, Inc., Springfield, N. J. Filed Dec. 1, 1938. Serial No. 413,374. Published Feb. 14, 1939. Class 6.

366,872. Hair Tonic. Cosmetics Research Corp., New Haven, Conn. Filed Dec. 9, 1938. Serial No. 413,621. Published Feb. 14, 1939. Class 6.

Fatty Acids

The growing importance of fatty acids as raw materials for the soap industry . . . a study and discussion of the trends and progress in fatty acids and the problems which they present to the soap maker . . . an article on "Fatty Acids in the Soap Industry" by Dr. J. Davidsohn and A. Davidsohn, well-known European soap experts . . . to be published in an early issue.

Friends of Economy PQ SILICATES For HOUSEHOLD AND INDUSTRIAL SOAPS

ARE YOU acquainted with the various members of the PQ Silicate of Soda family? ($3\text{Na}_2\text{O}, 2\text{SiO}_2$ to $\text{Na}_2\text{O}, 3.9\text{SiO}_2$) They'll prove business builders and profit makers for you, as the market for silicated detergents continues the upward trend. PQ Silicates give America's leading brands these advantages:

1. Improved sudsing ability.
2. Quick wetting.
3. Thorough dirt removal power.
4. Suspending power to prevent redeposition of dirt.

Besides their use in regular soaps and cleaners, PQ Silicates add greater value to specialized detergents for numerous different applications, from kier assistant to aluminum cleanser.

Every soap manufacturer should have for reference the series of PQ Bulletins on Detergency. Send for a set, without obligation.

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General Offices and Laboratory: 125 S. Third St., Phila., Pa.
Chicago Sales Office: Engineering Bldg. Stocks in 60 cities.
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Works: Anderson, Ind., Baltimore, Md., Chester, Pa., Buffalo,
N.Y., Kansas City, Kans., Jeffersonville, Ind., Rahway, N.J.,
St. Louis, Mo., Utica, Ill.



Raw Material Markets

As of May 22, 1939

NEW YORK—The soap and sanitary chemical raw material market was more active this period with the general trend of prices upward. Prices in the oil and fats market moved higher, the most notable movements being those of coconut and linseed oils. Both candelilla and carnauba moved upward in the wax list. Rosin also moved to higher levels. Increased activity characterized the essential oil market with no definite price trend.

CHEMICALS

Cresylic Acid

Quotations for domestic acids were without price fluctuation, and the weakness in the lower grades was confined to large quantities of lower class materials. Activity in the market was still quite irregular.

Naphthalene

Business in the naphthalene market was considered about fair during the recent period. Weather conditions were not entirely ideal for any stimulation in consumer demand for the refined grade. Dealings in domestic crude were along routine lines, although a slight firmness was evident in the imported crude material.

Rosin

Prices in the rosin market, this period, moved upward; a gain of as much as 15 cents being noted on some grades. According to a report released by the U. S. Department of Agriculture, rosin production in the United States during the naval stores season beginning April 1, 1938 and ending March 31, 1939, amounted to 2,612,391 barrels.

OILS AND FATS

Coconut Oil

The coconut oil market was featured by a firm tone this period, probably due to the absence of any material change in conditions pre-

vailing abroad. Occasional inquiries were noted for the crude oil and business was reported to have been closed at 3 $\frac{3}{8}$ cents per pound. An optimistic note was struck in this market when the senate committee on territories and insular affairs reported the Tydings bill which contains a provision for the removal of the Philippine coconut oil tax.

Palm Oil

A steady tone prevailed in the palm oil market in the recent period, with no evident price changes. Importations at the end of the first quarter of 1939 amounted to 87,174,122 pounds; consumption, 74,957,043 pounds, and factory and warehouse stocks on hand at the end of March, 126,080,504 pounds.

Tallow

The tallow market continued to be featured by a steady tone. Inquiry was reported better at some times but actual business was apparently limited to small or moderate lots; the movement of such quantities being unimportant.

PERFUMING MATERIALS

Cassia Oil

Prices on cassia oil dropped ten cents per pound during the recent period, and were on the easy side most of the time because of the current competitive trend. China exported 18,900 pounds of this oil to the United States in March. The price range now in effect calls for 85 to 90 cents per pound for redistilled, U.S.P.

Lemon Oil

There was a sharp advance in prices on both domestic and imported grades in the lemon oil market this period. The imported grade advanced from a range of \$2.50 to \$3.00 per pound to one of \$2.75 to \$3.25 per pound. The domestic price advanced the same amount and is now being quoted at \$2.40 per pound. In the

face of this advance, movements were light throughout the period with plentiful stocks on hand.

Eucalyptus Oil

A much firmer position was noted in the eucalyptus oil market; the firmness being reflected in an advance of prices which brought the range up to 38 to 39 cents per pound in cans. This was a rise of four cents per pound. The drought in Australia has hurt oil production considerably.

WAXES

Carnauba Wax

Prices on all grades of carnauba wax advanced about two cents per pound during this period. Unlike last period, there was a very active demand for both spot and forward deliveries, and a large volume of business was transacted. Yellow waxes are scarce everywhere; being quoted in New York at 40 to 40 $\frac{1}{2}$ cents per pound.

Candelilla Wax

Quotations in the candelilla wax market were higher all around this period. The range was 15 $\frac{1}{2}$ to 16 $\frac{1}{2}$ cents per pound on spot ton lots. This advance brought prices nearer to a proper parity and in line with replacement costs.

Eugene Muller in New York

Eugene Muller, J. Mero & Boyeau, perfume raw materials, Grasse, France, is visiting friends and customers in the United States and Canada. While in New York, he is making his headquarters at Dodge & Olcott Co., who are the selling agents in the United States for J. M. & B.

Ellis Leaves Wilson Co.

It has recently been announced that Joseph Ellis is no longer associated with Frank E. Wilson, chemical manufacturer and distributor, Philadelphia.

ISCO WAXES

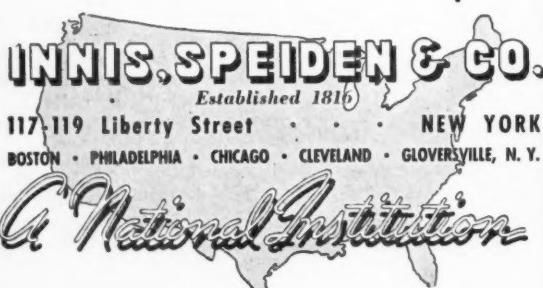
These should not be regarded as "just another" of our lines. Here they are *major* items. Our experience of three decades has taught us best methods of cleaning and refining.

PURE CARNAUBA and CANDELILLA WAX
Flake and Lump Form—100% Pure
BEESWAX
Pure Yellow Refined—1 lb. cakes and 10 lb. slabs
Pure White Sunbleached—cases approx. 100 lbs.
Disc—1 lb. cakes and 10 lb. slabs
CERESINES (Domestic)
White, Yellow, Lemon Yellow and Orange
Prime quality, uniform Flakes and 8-10 lb. cakes
OZOKERITE WAX
White, Yellow, Hard Green—All melting points

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Manufacturing good Caustic Potash is one of our specialties.
Solid • Flake • Granular • Powdered Liquid. In various packages.

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In various packages

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(Ferric Chloride)
The good properties of this product adapt it to a wide variety of industrial uses.
Lump and Liquid forms



BOOKS

Modern Soap Making, by Dr. E. G. Thomssen and C. R. Kemp. The first entirely original American book on soap manufacture in several years. Thoroughly covers every phase of soap manufacture and glycerin recovery. Written by practical soap men....a truly practical book. Chapter headings: Raw Materials; Machinery and Equipment; Soap Making Methods; Soap Products; Glycerin Recovery and Refining; Analytical Methods; Appendix with reference tables, etc. 540 pages. \$7.50 per copy in U. S. Add 50 cents for foreign postage.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. A handy reference book listing 10,000 miscellaneous formulas, including special sections for soaps, polishes, insecticides, etc. 800 pages, \$4.00.

The Industrial Chemistry of Fats and Waxes, by Hilditch. A study of the fats and waxes in relation to their use in industry. 450 pages, \$7.50.

Hydrogenation of Organic Substances, by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages, \$15.00.

Laundry Chemistry, by A. Harvey. A manual on the chemistry of laundry materials and methods. 120 pages. 5 x 7½, \$1.75.

Pyrethrum Flowers, by Gnadinger. A complete compilation of all known facts on pyrethrum; its history, sources, evaluation, chemistry and uses. The problems involved in the manufacture of pyrethrum products are given thorough and lucid exposition. 396 pages, \$5.00.

"**Soap**." Bound volumes for years 1927-28, and 1937 available at \$12.00 each.

Blue Book. A Buyer's Guide, Catalogue and Business and Technical Reference Book. 210 pages, \$1.00.

Vegetable Fats and Oils, by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods, \$6.50.

Chemistry of Laundry Materials, by D. N. Jackman. A useful book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalies, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages, \$2.50.

Modern Cosmetics, by Francis Chilson. Second edition with complete revision of text, addition of many new chapters, tested and revised new formulas, \$6.00.

Owing to the large numbers of books supplied it is impossible to open accounts on individual book orders or to supply books on approval. Please send check with order.

MAC NAIR-DORLAND CO.
254 West 31st Street, NEW YORK CITY

Raw Material Prices

(As of May 22, 1939)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	\$.05%	\$.06%
Acid, Boric, bbls., 99½ %	ton	106.00	138.00
Cresylic, drums	gal.	.63	.64
Low boiling grade	gal.	.69	.71
Muriatic, C. P., carboys	lb.	.06½	.08
Oxalic, bbls.	lb.	.10%	.12
Adeps Lanae, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17½	.19
Alcohol, Ethyl, U.S.P., bbls.	gal.	4.56½	4.59½
Complete Denat., SD 1, drums, ex. gal.	gal.	.27½	.30½
Alum, Potash lump	lb.	.036	.038
Ammonia Water, 26°, drums	lb.	.02	.02½
Ammonium Carbonate, tech., bbls	lb.	.08	.12½
Bentonite 1, works	ton	—	16.00
Bentonite 2, works	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.25	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	.83
L. C. L.	gal.	.73	1.17
Caustic, see Soda Caustic. Potash Caustic	ton	—	—
China Clay, filler	ton	10.00	25.00
Cresol, U.S.P., drums	lb.	.10	.10½
Creosote Oil	gal.	.13½	.14½
Feldspar	ton	14.00	15.00
(200 to 325 mesh)	—	—	—
Formaldehyde, bbls.	lb.	.05%	.06½
Fullers Earth	ton	10.00	30.00
Glycerine, C. P., drums	lb.	.12½	.13
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.09	.10
Soap, lye drums	lb.	.07%	.07½
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.	—	—	—
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs	lb.	.99	1.13
Naphthalene, ref. flakes, bbls.	lb.	.05%	.06
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorbenzene, bbls., kegs	lb.	.12½	.15½
Petrolatum, bbls. (as to color)	lb.	.02%	.03%
Phenol (Carbolic Acid), drums	lb.	.14½	.15½
Pine Oils, bbls.	gal.	.50	.54
Potash, Caustic, solid	lb.	.06%	.06½
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03½	.03½
Potassium Carbonate, solid	lb.	.06½	.06½
Liquid	lb.	.03	.03½
Pumice Stone, powder	100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—	—	—	—
Grade B to H, basis 280 lbs.	bbl.	4.60	6.25
Grade K to N	bbl.	6.25	6.60
Grade WG to X	bbl.	7.15	7.65
Wood	bbl.	4.00	5.45
Rotten Stone, pwd. bbls.	lb.	.01%	.02½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04½	.04½
Olive Castile, bars	lb.	.27½	.30
Olive Castile, powder	lb.	.27	.38
Powdered White, Neutral	lb.	.20	.22
Olive Oil Foot, bars, 68-70%	lb.	.09	.09½
Green, U.S.P.	lb.	.11	.13½
Tallow Chips, 88%	lb.	.07%	.07½
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.08	1.35
Car lots, in bulk	100 lb.	.90	.95

Soda Caustic, cont., wks., solid	100 lb.	—	2.30
Flake	100 lb.	—	2.70
Liquid, tanks, 47-49%	100 lb.	—	1.95
Soda Sal., bbls.	100 lb.	\$1.10	\$1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07%	.08%
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	2.20	3.15
Crystalline	100 lb.	2.90	4.20
Sodium Pyrophosphate	100 lb.	5.10	5.55
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.21	.28
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	lb.	.02	.026
Zinc Oxide, lead free	lb.	.06½	.07%

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.06½	Nom.
Castor, No. 1, bbls.	lb.	.08¾	.09½
No. 3, bbls.	lb.	.08¼	.09
Coconut (without excise tax)	—	—	—
Manila, Tanks, N. Y.	lb.	—	.03%
Tanks, Pacific Coast, futures	lb.	.03	—
Copra, bulk, coast	lb.	.019	—
Corn, tanks, mills	lb.	.06	.06½
Cottonseed, crude, tanks, mill	lb.	.05%	.05%
PSY, futures	lb.	.07	.07%
Fatty Acids,	—	—	—
Corn Oil, tanks	lb.	.08½	.08%
Coconut Oil, tanks	lb.	.08¼	.08½
Cotton Oil, tanks	lb.	.07½	.07%
Settled soap stock	lb.	.03½	.03½
Boiled soap stock, 65%	lb.	.04½	.04½
Foots, 50%	lb.	.01½	.01%
Linseed Oil	lb.	.10	.10½
Red Oil, bbls., dist. or sapon.	lb.	.07%	.08%
Tanks	lb.	.06½	.07%
Stearic Acid,	—	—	—
Double pressed	lb.	.10½	.11½
Triple pressed	lb.	.13½	.14½
Greases, choice white bbls.	lb.	.05%	.05½
Yellow	lb.	.04%	.05
Lard, city	lb.	.06%	.07
Linseed, raw, bbls.	lb.	.0900	.0920
Tanks, raw	lb.	.0840	.0860
Boiled, 5 bbl. lots	lb.	.0980	.1000
Olive, denatured, bbls., N. Y.	gal.	.84	.85
Foots, bbls., N. Y.	lb.	.07	.07%
Palm, shipment	lb.	.03	—
Palm Kernel, shipment	lb.	.0340	Nom.
Sesame Oil, dms.	lb.	.09	.09½
Soya Bean, domestic tanks, crude	lb.	.05½	—
Stearine, oleo, bbls.	lb.	.05¼	.06
Tallow, special, f.o.b. plant	lb.	.05½	—
City, ex. loose, f.o.b. plant	lb.	.05%	—
Teased Oil, crude	lb.	.09½	.09½
Whale, refined	lb.	.0770	.0790

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White Neutral

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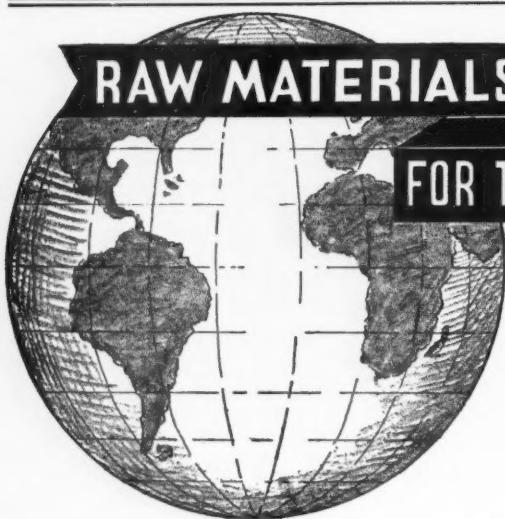
RAW MATERIALS

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Perilla Oil
Rapeseed Oil
Sesame Oil
Soya Bean Oil
Teased Oil

Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein

Tallow
Grease
Lanolin
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(As of May 22, 1939)

Essential Oils

Almond, Bitter, U.S.P.	lb.	\$1.90	\$2.00
Bitter, F. F. P. A.	lb.	1.95	2.05
Sweet, cans	lb.	.57	.58
Anise, cans, U.S.P.	lb.	.70	.75
Bay tins	lb.	1.20	1.25
Bergamot, coppers	lb.	3.65	3.85
Artificial	lb.	1.25	1.30
Birch Tar, rect. tins	lb.	.60	.65
Crude, tins	lb.	.15	.18
Bois de Rose, Brazilian	lb.	1.55	1.60
Cayenne	lb.	1.50	1.75
Cade, cans	lb.	.41	.44
Cajeput, native, tins	lb.	.50	.52
Calamus, tins	lb.	5.50	6.00
Camphor, Sassy, drums	lb.	.27	Nom.
White, drums	lb.	.27	Nom.
Cananga, native, tins	lb.	1.25	1.30
Rectified, tins	lb.	1.80	1.85
Caraway Seed	lb.	1.75	1.80
Cassia, Redistilled, U.S.P.	lb.	.85	.90
Cedar Leaf, tins	lb.	.60	.62
Cedar Wood, light, drums	lb.	.28	.30
Citronella, Java, drums	lb.	.27	.28
Citronelle, Ceylon, drums	lb.	.33	.34
Clove, U.S.P., tins	lb.	.98	—
Eucalyptus, Austl., U.S.P., cans	lb.	.38	.39
Fennel, U.S.P., tins	lb.	1.05	1.10
Geranium, African, cans	lb.	2.70	3.50
Bourbon, tins	lb.	2.65	2.85
Turkish	lb.	2.00	2.25
Hemlock, tins	lb.	.65	.70
Lavender, U.S.P., cans	lb.	2.00	4.75
Spike, Spanish, cans	lb.	1.05	1.10
Lemon, Ital., U.S.P.	lb.	2.75	3.25
Cal.	lb.	2.40	—
Lemongrass, native, cans	lb.	.38	.40
Linaloe, Mex., cases	lb.	1.25	1.30
Nutmeg, U.S.P., tins	lb.	1.12	1.15
Orange, Sweet, W. Ind., tins	lb.	1.70	1.75
Italian cop	lb.	2.00	3.00
Distilled	lb.	.50	—
California	lb.	1.00	—
Origanum, cans, tech	lb.	.90	1.00
Patchouli	lb.	3.35	6.50
Pennyroyal, dom.	lb.	2.10	2.15
Imported	lb.	1.85	1.90
Peppermint, nat., cans	lb.	2.15	2.40
Redis, U.S.P., cans	lb.	2.40	2.65
Petitgrain, S. A., tins	lb.	.80	.85
Pine Needle, Siberian	lb.	.95	1.00
Rosemary, Spanish, tins	lb.	.56	.75
drums	lb.	.51	.70
Sandalwood, E. Ind., U.S.P.	lb.	4.75	4.80
Sassafras, U.S.P.	lb.	.90	1.00
Artificial, drums	lb.	.36	.37
Spearmint, U.S.P.	lb.	1.70	1.75
Thyme, red, U.S.P.	lb.	.85	1.25
White, U.S.P.	lb.	.85	1.45
Vetivert, Bourbon	lb.	3.50	15.00
Ylang Ylang, Bourbon	lb.	2.50	3.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.30	\$1.45
Amyl Cinnamic Aldehyde	lb.	2.00	2.25
Anethol	lb.	1.00	1.05
Benzaldehyde, tech.	lb.	.60	.70
U. S. P.	lb.	.85	.95
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.10	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.60	1.85
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	2.75	4.65
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.55	.57
Eugenol, U.S.P.	lb.	1.70	2.15
Geraniol, Domestic	lb.	.67	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	1.80	2.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	oz.	2.00	2.13
Ionone	lb.	1.30	4.05
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	2.10	6.30
Linalyl Acetate	lb.	1.35	2.25
Menthol	lb.	3.00	3.35
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.30
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.37
Musk Ambrette	lb.	3.25	3.65
Ketone	lb.	3.40	3.80
Xylene	lb.	1.00	1.25
Phenylactaldehyde	lb.	2.10	3.50
Phenylacetic Acid	lb.	1.75	3.00
Phenylethyl Alcohol	lb.	2.50	3.35
Rhodinol	lb.	5.55	10.80
Safrol	lb.	.50	.53
Terpineol, C. P., 1000 lb. drs.	lb.	.23	.24
Cans	lb.	.25	.30
Terpinyl Acetate, 25 lb. cans	lb.	.77	1.00
Thymol, U.S.P.	lb.	1.40	1.45
Vanillin, U.S.P.	lb.	2.10	2.35
Yara Yara	lb.	1.25	1.56

Insecticide Materials

Insect Powder, bbls.	lb.	.30	.31
Concentrated Extract			
5 to 1	gal.	1.60	1.70
20 to 1	gal.	6.25	6.35
30 to 1	gal.	9.20	9.35
Derris, powder—4%	lb.	.18	.28
Derris, powder—5%	lb.	.24	.34
Cube, powder—4%	lb.	.20	.24
Cube, powder—5%	lb.	.24	.28

Gums

Arabic, Amb. Sts.	lb.	.10½	.11
White, powdered	lb.	.13	.14
Karaya, powdered No. 1	lb.	.14	.23
Tragacanth, Aleppo, No. 1	lb.	2.25	2.85
Flake	lb.	.50	1.00

Waxes

Bees, white	lb.	.37	.39
African, bgs.	lb.	.19	.20
Refined, yel.	lb.	.25½	.26
Candelilla, bgs.	lb.	.15½	.16½
Carnauba, No. 1	lb.	.40	.41
No. 2, N. C.	lb.	.36¾	.37½
No. 3, Chalky	lb.	.29½	.30½
Ceresin, yellow	lb.	.08½	.11½
Paraffin ref. 125-130	lb.	.039	.040

Removes ODOR COLOR TASTE

THE ability of activated carbon to remove objectionable odors and colors from oils and fats is of considerable advantage to the oil and soap industry. This characteristic of activated carbon, namely adsorption, completely removes undesirable impurities without affecting the fats and oils themselves.

The distinctive feature of Nuchar Activated Carbon is its abnormally high porosity and consequent extraordinary adsorptive properties.

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Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Liquid Soap Manufacture

LIQUID soaps are not only practical but hygienic, particularly for use in public places. Desirable properties include clarity, neutrality, rapid lather production, not too great a volume of lather, good cleansing action, sufficient viscosity and an agreeable odor which is not too lasting. Cleansing action of course has nothing to do with freedom from turbidity, but the latter is demanded by the public who probably associate it with purity and lack of objectionable ingredients. To ensure transparency, distilled or softened water should be used in making these soaps, as calcium soaps from hard water are difficult to remove completely by filtration. Some manufacturers try to ensure transparency by using an excess of alkali, but this is bound to be harmful to the skin. A slight excess is necessary for complete saponification, but only a slight excess.

Liquid soap for textile purposes can be somewhat sharp. In the course of several years' experience, it has been determined that such a soap becomes neutral. Irritating effects on the skin are then doubtless due to free fatty acids such as those from coconut oil and castor oil, to which some people are sensitive.

In order to obtain completely saponified products which are also neutral, various substances have been used for neutralization, such as Tur-

key red oil or boric acid to neutralize alkali, and triethanolamine to neutralize free fatty acids. The desired lathering properties can be obtained by the proper selection of fats. Coconut oil and palm-kernel oil soaps give a rapid-forming but large-bubble lather which dissipates quickly. Castor-oil soap alone gives scarcely any lather but combined with palm-kernel oil or coconut oil is specially suited to liquid soaps. Such soaps give a quick, thick and fine-bubble lather which is reasonably lasting.

Liquid soaps must have "body" so as to be more thick-flowing than water. The viscosity of low-per cent soaps can be increased with the aid of thickening agents such as potash carbonate, potassium chloride or sugar. Potash increases the detergency of the soap and also increases alkalinity. Sugar is used in liquid soaps designed for hand cleansing and for shampoos. Terpineol, used for perfuming, has a thickening action but loses it after a time. Cheap liquid soaps for general purposes are often perfumed with almond oil or benzaldehyde. More expensive soaps use the same kinds of perfumes as are used in other cosmetic articles. Perfume in a liquid soap must give a clear solution and must be evenly distributed throughout the soap batch. Since ethereal oils in their concentrated form seldom do this, they are first mixed with alcohol or with some

other solvent intended for the purpose, a number of which are sold under trade names. Terpeneless oils and those free from resins and balms should be used.

Cochin coconut oil should be fresh for use in liquid soap. Its saponification number is 250-255. Palm-kernel oil is much less used because of its characteristic strong odor which is difficult to cover up. The saponification number is about 245. Castor oil has a saponification number of about 181. The cold-pressed oil is preferable. Linseed oil, soybean oil and peanut oil are also used, the first two only in inexpensive soaps as they may undergo oxidation and develop a bad odor. The saponification number of all three is about 193. Olive oil and olein are also used.

Turkey-red oil used for neutralization is ordinarily the 40 per cent product. The oil is mixed with twice the amount of distilled water and added in successive small portions to the soap, as necessary. Commercial triethanolamine is a mixture of mono-, di- and triethanolamine and is soluble in water, glycerine, alcohol and similar solvents. It turns red litmus blue but does not turn phenolphthalein red. When boric acid is used to neutralize excess alkali, 16 parts of the solid acid are dissolved in 100 parts of warm water and the solution stirred into the cooled liquid soap. Excess free alkali can be

determined volumetrically and the required amount of boric acid for neutralization calculated.

Liquid soaps are prepared in three ways; (1) By dissolving up a paste soap or a high per cent potash soap, (2) by saponification of neutral fats, and (3) by fatty acid saponification. The first method is the oldest and simplest. A smooth paste soap containing no filter is the starting material. It should be a potash soap with a fatty acid content of about 38-40 per cent. It is dissolved in half the calculated amount of hot water, and the rest of the water added cold. After mixing, alcohol, glycerine and other agents are stirred in. A formula for this type of soap is as follows:

	Parts by weight
Potash soap.....	1000
Distilled water.....	750
Alcohol	250
Glycerine	50
	Parts by weight
Terpineol	6
Benzyl acetate	2
Geranium oil	1
Aubepine	1

This soap is stored for at least 14 days, then the clear liquid is siphoned off from the settled material and filtered.

The emulsion method, starting with neutral fats, is a common method of manufacture, using the following:

	Parts by weight
Coconut oil	31.5
Castor oil	10
Caustic potash, 50°Be....	20.5
Sugar	22
Distilled water	200

The coconut oil is melted in a double-walled vessel and brought to about 85° C., then the castor oil added. The potash lye is stirred in, in a thin stream, then about a third of the water in small portions. An emulsion forms soon after addition of water, which is yellowish or white in appearance. The vessel is covered and allowed to stand for about an hour. The time can be shortened if the contents are vigorously stirred occasionally and again covered. Soap forms as a dark-colored clear mass under a thin layer of foam. A por-

tion is tested with phenolphthalein. It should give an alkaline reaction but should not be too sharp. In the latter case, coconut-oil fatty acids or castor-oil fatty acids are added, having been melted first. After thorough mixing, the kettle contents are allowed to stand for a short time. If the soap is too weak a small amount of caustic potash is diluted with water and stirred in.

The sugar is dissolved in twice its amount of water and allowed to stand. The layer of foam is carefully siphoned off, the sugar solution added, and the remainder of the water. This cools the soap down so that perfume and color can be added.

Liquid soaps are stored when possible for several weeks at a temperature between 0 and 5° C. Soaps for general use can be sold after a sufficient storage period and careful siphoning without final filtration. Better soaps and special soaps are always filtered, as some turbidity is apt to develop later. In filtering, a little soap is advantageously mixed with some asbestos wool and put through the filter. In this way a thin asbestos layer is deposited over the filter cloth and filtration is very rapid. The first portion of filtrate is returned to the filter to ensure transparency. The minimum storage period can be reduced from 14 days to 2 days by treating the liquid soap with freshly precipitated aluminum hydroxide. This gel carries down impurities and in the case of textile soaps subsequent filtration is unnecessary.

A formula using fatty acids contains:

	Parts by weight
Coconut-oil fatty acids...	30
Soybean-oil fatty acids...	10
Castor-oil fatty acids....	5
Olein	15
Caustic potash, 50°Be....	29
Sugar	5
Distilled water	406

The caustic potash and a third of the total amount of water are brought to boiling in the usual soap kettle. The fatty acids are melted separately and heated to 70-80° C. The warm fatty acids are introduced

into the lye in a thin stream with stirring. Some carbon dioxide is evolved then the fatty acids are quickly saponified. Further amounts of fatty acids are stirred in, heating no longer being necessary. Adjustment of alkalinity is made as in the emulsion process. The rest of the water and the sugar are added, the soap perfumed and colored, stored and filtered. Ekmann. *Riechstoff Industrie und Kosmetik* 14, 49-59 (1939).

Centrifugal Salt Draining

The use of centrifugals in soap plants for draining salt has resulted in a number of improvements in operation and decided savings in the cost of spent lye evaporation. In the centrifugal process the salt sludge is blown to an elevated tank whence it may be charged by gravity to the centrifugal. With a few minutes' spin the liquid phase of the sludge is reduced by centrifugal force to a small fraction of that possible in drain boxes, leaving a minimum amount to be displaced by washing. Then, by successive washes with spent lye and a little water—both greatly reduced in volume from that necessary in the less efficient drain box—the glycerine content of the salt may be reduced to 0.25 per cent or less. Obviously the reduction in volume of wash is due to the fact not only that sprays may be efficiently applied to the whirling load but because the liquor left between the crystals after the successive steps of predraining and washing is reduced to a minimum volume by the high centrifugal force, each step minimizing the next.

In consequence, the added load of wash water on the evaporator is reduced to a negligible quantity and the amount of salt re-dissolved is insignificant. By properly limiting the spinning time of the centrifugal after washing is completed, there is produced a salt containing no excess moisture with its disagreeable consequences, yet with a uniform and controlled moisture content just sufficient to avoid caking in the bins. P. A. Bryson, *Process Industries Quarterly* 3, No. 4. 8 (1939).

Products and Processes

Dairy Washing Powders

Standard dairy cleaners in common use contain one or more of the following: Caustic soda, sodium metasilicate, trisodium phosphate, soda ash, sodium bicarbonate, pumice and other abrasives. Each of these materials has special properties in the cleaning of dairy equipment; soda ash cuts the fat, trisodium phosphate softens the water, and silicates give a brightening appearance to the equipment. No one ingredient is likely to be adequate. The detergent should be selected for the particular cleaning job it is required to do. A. H. Bayer. *Dairy Inds.* 4, No. 1, 37-8 (1939).

New Sulfonated Compound

A sulfonated cleansing agent consists of an alkali metal salt of a sulfonated aniside of oleic acid, made by adding oleic acid chloride to an aqueous solution containing an anisidine sulfonic acid and an alkali metal hydroxide. This reaction mixture is stirred until a sample from it dissolves to give a clear foaming solution in water. Canadian Industries Ltd. Canadian Patent No. 380,815.

Alkaline Salt Detergent

Alkaline salt detergents are obtained by mixing a sodium silicate having a $\text{Na}_2\text{O}:\text{SiO}_2$ ratio higher than 1:1 with sodium bicarbonate, monosodium phosphate, disodium phosphate or a borate having a $\text{B}_2\text{O}_3:\text{Na}_2\text{O}$ ratio higher than 1:1 and causing them to react. Water-glass may also be present in the reaction mixture. The ratio of Na_2O to acidic oxides in the reaction product may be 1:2:1 and the $\text{Na}_2\text{O}:\text{SiO}_2$ ratio of the silicate component should not fall below 1:1. Mixing should be effected with insufficient water to dissolve the reactants; when a hydrated product is obtained it may be heated to dehydrate it. Alkali carbonates, tri-

sodium phosphate, sodium metaphosphate and sodium acetate, as well as insoluble abrasive materials such as silica, pumice or volcanic ash, may be added to the mixture. Pennsylvania Salt Manufacturing Co. British Patent No. 494,628.

Gel Cleaning Agent

1-Alkoxy-2- or -4-aminoaryl sulfonic acids of the benzene series with primary or secondary amino groups are acylated by oleyl chloride in alkaline solution to give oleyl-aminoaryl sulfonic acids. Thus *p*-phenetidine-2-sulfonic acids is stirred with aqueous sodium hydroxide solution and oleyl chloride added to give a gel-like product useful as a cleaning agent. Imperial Chemical Industries Ltd. German Patent No. 667,794.

Shaving Creams

Lathering shaving creams may be prepared from fatty acids alone. Heat is produced during the process so that less outside heat is required than in the saponification of neutral fats. All of the fatty acids including stearic acid, plus glycerine, are melted together at a temperature exceeding the melting point of the mixture by 10-15° C. The lye and water are heated to 75-80° C. Otherwise the production is the same as in the usual saponification methods.

A latherless shaving cream for sensitive dry skins is made as follows: 10 parts of solid white paraffin, 20 of white petrolatum and 10 of stearin are heated to 70° C. One part of triethanolamine is heated to the same temperature, then added to the mixture. After stirring for some time, 20 parts of glycerine plus 40 of water are heated to 70° C. and added to the above. The entire mass is agitated until it assumes a creamy consistency on cooling.

The small amount of fat which remains on the face after a shave with

this cream can be rubbed into the skin, for it is similar to a massage cream. This type of cream renders the skin less sensitive to the sun's heat in Summer and to frost in Winter.

A special non-lathering cream for oily skin is analogous to the above but minus its mineral-oil ingredients: 18 parts of stearin are heated to 70° C. into which one part of triethanolamine is stirred after being heated to the same temperature. Fifteen parts of glycerine and 40 of water are heated to 70° C. and added to the mixture. The contents are stirred and allowed to cool. The temperature should not be allowed to rise above 70° C. or the triethanolamine may be decomposed. J. Davidsohn and A. Davidsohn. *Am. Perfumer*, 35-8 (April 1939).

Liquid Antiseptic Soap

A strongly antiseptic soap in liquid form has a high content of cresol, the formula being; 120 parts by weight of linseed oil, 27 parts of caustic potash, 41 parts of water, 12 of alcohol and 200 parts of crude cresol. *Seifensieder-Ztg.* 66, 208 (1939).

Synthetic Fatty Acids

Synthetic fatty acids are obtained by the oxidation of hydrocarbon mixtures of paraffins. The first phase is the oxidation of the hydrocarbon chain when the principal reaction is the splitting of the chain into two molecules of fatty acid. Various fatty acids are formed by the splitting process; these are mostly monocarboxylic acids. Some hydroxyacids and peroxides are also formed. Peroxide formation is reduced by operating at as low a temperature as possible, such as 80-120° C. in the presence of suitable catalysts. Introduction of air for oxidation in the form of very fine streams is also an aid. Oxidation is stopped when the saponification number of the treated fat reaches a value between 100 and 200.

The products are saponified. Part of the unsaponified material accumulates on the surface of the

soap solution and part remains dissolved. The latter can be removed by extraction with a solvent at 60-80° C. or by distillation at 300-400° C. In the latter method care is necessary in order to avoid decomposing the products of oxidation.

The crude fatty acids are next liberated from the soap and fractionated in vacuo. Too short and too long chains are eliminated by this means, at the same time getting rid of compounds with disagreeable odors and those having poor detergent properties. Fatty acids so obtained can be used in the preparation of soft soap, powdered soap or household soap. They can also be added to natural fats in making toilet soap. *Les Matières Grasses* 31, 55 (1939).

Special Detergent

Detergents water-soluble compounds having molecules that contain a fatty radical and a water-solubilizing group together capable of forming an anion are mixed to give a solid or pasty composition with salts or sulfamic acid or imino-disulfonic acid. The detergent compounds specified are sulfonated oils, sulfonated oleic and ricinoleic acids, soaps and sulfates and other esters of higher fatty alcohols. E.g., a solution of soap flakes is prevented from forming a jelly on cooling by the addition of ammonium sulfamate. Blankets are washed with a solution of soap, sodium sesquicarbonate and sodium sulfamate, and then with a solution of soap and sodium sulfamate. John G. Evans and Imperial Chemical Industries Ltd. British Patent No. 496,209.

Preventing Fog on Glass

Preparations for treating glass and similar surfaces to prevent the deposition of moisture, fog or frost consist of a sulfonated vegetable oil, a sulfonated fatty acid or a sulfated fatty alcohol, or a mixture of these, together with about 5 per cent of a hydrocarbon oil. Glycerine may also be present. John S. Banks. British Patent No. 494,113.

Dry-Cleaning Soaps

The following dry-cleaning soaps are made in the usual way by warming the fatty acids, fats and solvents together, taking care to keep the temperature low enough so that the solvent will not volatilize to too great an extent. The necessary amount of alkali is added to the warm mixture with vigorous stirring.

	Parts by weight
Oleic acid	35
Stearic acid	5
Caustic Potash, 50°Be.....	12
Ammonia, 26°Be.....	1
Diglycol oleate	3
Water	5
Alcohol	2
Cyclohexanol	5
Benzine	32
	Parts by weight
Oleic acid	30
Caustic potash, 50°Be.....	6
Ammonia, 26°Be.....	3
Water	9
Alcohol	15
Cyclohexanol	15
Benzine	22

The product should be aged for a time. *Riechstoffindustrie* 14, 40-1 (1939).

Producing Dry Soap

Dry soap and glycerine are produced by passing a current of superheated steam through a retort in which there is constantly maintained a pressure less than atmospheric. A fat or oil and an alkali are injected separately into the current of steam in the retort, and the soap which is produced is removed from the retort by a mechanical operation. Lorenz Patents Corp. French Patent No. 830,435.

Synthetic Soap

Sulfanole PB, a new synthetic soap, has been announced recently by the Warwick Chemical Co., West Warwick, R. I. The new product can be used alone or in combination with soap. It is described as an aliphatic fatty derivative available in paste form, light brown in color, and possessing a clean pleasing odor. The product is stated to be completely stable in storage, will not turn rancid or oxidize, is chemically neutral, and does not hydrolyze. Its solutions have a pH value of 6.8 to 7. The product

is said to be readily soluble in cold water, to have powerful detergent and emulsifying properties, and to be equally effective in neutral, acid or alkaline solutions. It is resistant to the formation of insoluble lime precipitates in hard water and has marked stability to most metallic salts. *Textile World* 89, 109 (1939).

Unsaturated Alcohol Sulfate

A sulfuric ester of an unsaturated higher aliphatic alcohol is prepared by treating the alcohol with the additional product formed by treating dioxane with a sulfating agent selected from the group consisting of sulfur trioxide and chlorosulfonic acid; this reagent leaves the double bond substantially unsaturated. Procter & Gamble Co. of Canada. Canadian Patent No. 380,854.

Solvent Soap

Solvent soap is made by mixing finely powdered soap with a fat content of 78-87 per cent with a volatile hydrocarbon solvent insoluble in water, with the optional addition of alkaline or neutral inorganic salts, superfatting agents etc., and pressing the mixture through fine pores. As an example, powdered soap containing 78-87 per cent of fat is mixed with benzine or xylene, with the optional addition of oil of turpentine, dichloroethane and borax. Wollner-Werke and Max Dittmer. German Patent No. 667,684.

Alcohol Sulfate Tests

Fatty alcohol sulfate in aqueous solution can be differentiated readily from soap solution by the following tests: (1) The fatty alcohol sulfate solution shows an acid reaction to litmus, a soap solution an alkaline reaction. (2) Dilute mineral acid added to the ester solution does not liberate insoluble free fatty acid but does when added to soap solution. (3) Calcium chloride solution gives no precipitate with fatty alcohol sulfate but precipitates insoluble calcium salts from a soap solution. *Seifensieder-Ztg.* 66, 209 (1939).

Sulfated Fat Analysis

The active ingredients can be determined in true sulfonic compounds and in sulfuric acid esters by a new method. It is applicable to such products as the sulfated fatty alcohols, sulfonated fatty acid amides or esters, sulfonated alkyl naphthalenes, sulfonated mineral oils, as well as to the older type of sulfonated oils such as sulfonated castor oil. The essentials of the method are the extraction of active ingredients with solvents over a concentrated salt solution, evaporation of the solvent, heating the residue to constant weight, and determining the loss in weight upon ashing the residue. The difference in weight before and after ashing represents the loss of organic matter plus sulfur trioxide in the case of ester compounds or sulfur dioxide in the case of sulfonic compounds. From the results the total fatty matter and total active ingredients can be calculated. Ralph Hart. *Ind. Eng. Chem., Anal. Ed.* **11**, 33-4 (1939).

Soap Titrations

Contrary to Lottermoser and Ghose, potentiometric titration of sodium laurate with the quinhydrone electrode is possible up to a concentration of 0.015 M. A titration of 0.05 M sodium laurate with the glass electrode is reported with results in agreement with those of Lottermoser and Ghose as obtained with the antimony electrode. In the concentration range 0.0028 M-0.008 M one inflection point is found, between 0.008 M and 0.023 M two inflection points, and between 0.023 M and 0.100 M three inflection points. Results on titrating sodium laurate at 50°C. are explained on the basis of the transition of acid soap solid crystals to liquid crystals and the increased solubility of the latter. A nephelometric method for titrating soap above the transition temperature of the acid soap is based on the turbidity produced when free fatty acid first appears, just past the acid soap inflection point. The first inflection point is due to acid soap

precipitation, the second to precipitation of free fatty acid and the third to complete neutralization. The position of the second inflection point is influenced by the soap concentration. At low concentrations it tends to disappear. P. Ekwall. *Kolloid-Z.* **84**, 284-91 (1938).

Hardened Olive Oil

An olive oil of iodine number 80.7 and saponification number 191.8 had iodine number 0.3, saponification number 187 and melting point 67.1-70.7°C. after hardening. This material was saponified, the un-

Hydrogenation Catalysts

A catalyst that may be used for hydrogenation of oils is prepared by precipitating a carbonate of nickel, iron, cobalt or copper in aqueous solution and reducing the amount of combined carbon dioxide to less than 15 per cent of the metal content by prolonged boiling under alkaline conditions, preferably for at least 12 minutes. The volume of the precipitate when filtered on a Büchner funnel should be more than 9 cc. per gram of metal content. The precipitate is then suspended in oil and reduced by means of hydrogen, preferably after being washed and dried at about 125°C. Procter & Gamble Co. British Patent No. 492,636.

Superfatted Soaps

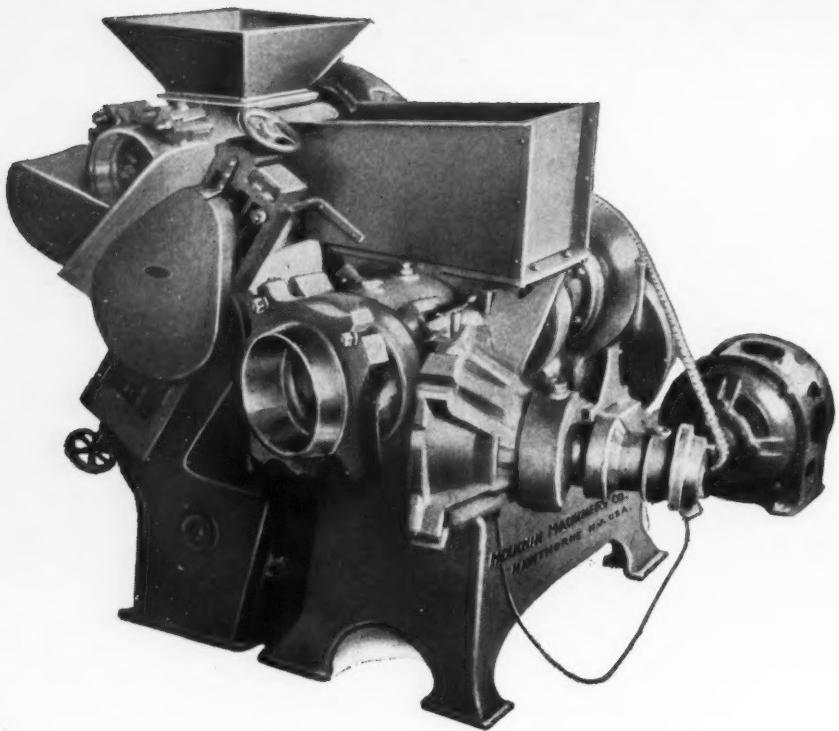
Was the discovery of superfatting soaps an accident? What is the real purpose of superfatting? Does it really accomplish its purpose,—and do manufacturers have the correct slant on the reasons behind it? A discussion of superfatted toilet soaps, pro and con, and the correct materials . . . by John Glenn in an early issue of SOAP & SANITARY CHEMICALS.

saponified part was removed and the mixed fatty acids were recovered. These were transformed to their methyl esters and fractionally distilled. The results showed: C₁₆ acids 7-10 per cent, C₁₈ acids 90-93 per cent, and a trace of C₂₀ and C₁₄ acids. This figure for C₁₆ acids is higher than those given in the literature. A hardened rapeseed oil had an iodine number of 0.6, saponification number of 170 and melting point of 59.4-61.4°C. This was obtained from a typical rapeseed oil with iodine number 100.4, and saponification number of 174.5. The composition of the mixed fatty acids of the hydrogenated rapeseed oil was stearic acid, with possibly some palmitic, 44 per cent, behenic acid 55 and lignoceric acid 1 per cent. Seiichi Ueno and Masayoshi Iwai. *J. Soc. Chem. Ind., Japan* **41**, Suppl. binding 256-7 (1938).

Catalyst Activity

The effect of impurities on the catalytic activity of nickel was studied with prepared mixtures in the hydrogenation of sunflower oil at 240° and 250° C. for 1½ hours. The contaminating ingredients were added to prepared nickel formate or to nickel sulfate solution before the precipitation with sodium formate. The activity of nickel is not affected in the presence of 50 per cent sodium sulfate at 250° and is considerably reduced with 10 per cent sodium sulfate at 240°. With 2-10 per cent nickel sulfate the activity is but slightly reduced, with 0.1-5 per cent lead sulfate not at all, and with 0.5-5 per cent of sodium formate very little. With 10 per cent sodium formate the catalyst became inactive.

With 0.5-10 per cent ferrous or ferric iron, aluminum and copper, based on nickel formate, there is no direct relation between the concentration of contaminants and the reduction of activity. With increasing additions of zinc and lead formates, the activity of nickel is proportionally reduced. The presence of 0.2 per cent sodium sulfide in commercial sodium formate, and 0.2 per cent phosphorus, in a recovered nickel catalyst, lowers the nickel activity appreciably. Yu Orlova. *Maslobino Zhirovoe Delo* **14**, No. 4, 9-11 (1928); through Chem. Abs.



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573—Hiergesell Hydrometer

Wm. Hiergesell & Sons, New York, are in production on a "streamline silvertip" hydrometer which is said to be of simple and rugged construction, having a body without ballast bulbs, glass seal ridges, necks and knobs, so as to facilitate its cleaning and usage, with less likelihood of breakage. Bulletins describing the equipment are available.

574—Drum Discharge Elevator

Barrett-Cravens Co., Chicago, has announced a light, portable barrel and drum elevating and emptying device. The new equipment is designed to handle round containers of a wide range of sizes and of wood, metal, fibre or other materials. A mechanical clamp is said to provide for quickly and securely stripping the container to the elevating arms, and only a slight touch on the part of the operator is necessary to tilt the container after it has been raised to the desired height.

575—Permutit Bulletin

The Permutit Co., New York, has issued a bulletin (No. 597) which describes in full, the Permutit Zeolite Process, a method of removing hardness from a water supply. Additional data is also given as to chemicals and reactions involved and about the water softening equipment itself. Various models are illustrated throughout the bulletin, of which copies are available.

576—New Boiler-Burner Unit

General Furnaces Corp., New York, has announced a new line of

"Cyclotherm" heating boilers with sizes ranging from 25 H.P. to 150 H. P. It is claimed that the boilers have an unusually high rate of heat absorption and high operating efficiency. The units can be fired by gas as well as oil. They operate at a positive pressure, and hence no stack draft is necessary. Bulletins giving detailed description are available.

577—Fuld Bros. Price List

Fuld Bros., sanitary chemicals, Baltimore, have issued a new price list which replaces all previous price lists and quotations. The list, which comprises 23 pages, is complete with all details.

578—Keck Co. Catalog

C. C. Keck Co., janitor supplies, Pittsburgh, has recently published a new 52-page catalog, (No. 39) which carries prices and pictures of its line of janitor supplies.

579—Agfa Price List

The Agfa Aromatic Division of General Drug Co., New York, has issued a price catalog of the Agfa perfumery products. The prices of many new compounds are quoted.

580—Water Hardness Bulletin

The Permutit Co., New York, has issued a bulletin "Removal of Iron and Hardness from Water" which describes some of the difficulties experienced in industry and in

Oil Clarification

Methods and processes for removing gum, slime, and dirt from oils and fats prior to their refining and bleaching . . . a discussion of patented and other means for preliminary treatment of soap oils . . . by Paul D. Boone in an early issue of SOAP & SANITARY CHEMICALS.

the home due to the presence of iron and hardness of water supplies. It also outlines methods that can be employed to overcome such difficulties, under varying sets of conditions.

581—D & O Price List

Dodge & Olcott Co., New York, has issued a new price list which contains short descriptions of their various essential oils, aromatic chemicals, perfume bases, etc.

583—Bakelite Plastic Booklet

Bakelite Corp., New York, has issued a new booklet entitled "New Paths to Profits," which is designed as a businessman's guide to modern plastic materials. It describes in non-technical language the properties and applications of Bakelite materials and is illustrated in color to show the color effects that are obtainable in these plastics.

584—Floor Service Folder

The floor maintenance division of Monarch Chemical Co., New Orleans, has recently issued a folder describing a complete floor restoration and maintenance service for New Orleans and vicinity.

585—Cleaning System Booklet

Trojan Products & Manufacturing Co., Chicago, has issued a booklet dealing with the "Trojan Rug-O-Vator" portable cleaning system. It describes each piece of equipment as well as giving general specifications and prices.

Synthetic Detergents

Washing and cleansing agents are prepared by condensing a halogenated aliphatic hydrocarbon in the presence of a bivalent metal with an acid of the formula RR'COOH, where R is an aromatic hydrocarbon radical and R' is an aliphatic hydrocarbon radical. As an example a chlorinated middle oil obtained by hydrogenating coal is condensed with cinnamic acid by the use of zinc as condensing agent. I. G. Farbenindustrie A.G. British Patent No. 493,109.

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No. 2,153,143, Liquid Antiseptic Soap, Patented April 4, 1939, by Louis J. Figg, Jr., and Edward E. Shaulis, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y. A liquid, antiseptic toilet soap comprising soap, water, hardwood oil whose boiling range is between 180° C. and 240° C. in a proportion which would otherwise cause substantial darkening thereof, a blending agent for the soap and the hardwood oil, and a halide selected from the group consisting of the bromides and iodides of potassium, sodium, casein, lithium, barium, strontium, calcium, and magnesium, in sufficient quantity to prevent the wood oil from darkening in the light and air.

No. 2,153,286, Wetting Agents and Detergents, Patented April 4, 1939, by William J. Sweeney, Baton Rouge, La., assignor to Standard Oil Development Company. Process for preparing wetting agents and detergents comprising cracking a paraffinic petroleum fraction selected from the group consisting of petrolatum and paraffin wax to provide a cracked fraction containing a mixture of olefines having more than six carbon atoms per molecule, reacting the mixture of olefines with a strong inorganic polybasic acid, and neutralizing the resulting mixture of alkyl acid derivatives of the acid.

No. 2,154,721, Automobile Polish, Patented April 18, 1939, by Arthur L. Blount, Palos Verdes Estates, and Marcellus T. Flaxman, Wilmington, Calif., assignors to Union

Oil Company of California, Los Angeles, Calif. A polish comprising a fine abrasive, an oxidized fatty oil to act as a glossing agent, a gum emulsifier and thickener, an aliphatic alcohol as a wetting and spreading agent, and a quantity of water.

No. 2,154,850, Insecticide, Patented April 18, 1939, by Arthur Gustav Kaufman, Associated, Calif., assignor, by direct and mesne assignments, to Tide Water Associated Oil Company, San Francisco, Calif. The process of preparing an emulsifier for hydrocarbon oils, which comprises: mixing a mono-hydroxylic benzene derivative having its hydroxyl directly attached to the benzene ring alone with an unsaturated fatty acid while at a temperature above the melting point of both, and below a temperature at which substantial volatilization or esterification occurs, to form an addition product unaccompanied by the formation of reaction products differing from the components of the mixture.

No. 2,154,977, Detergent Product, Patented April 18, 1930, by Reginald Furness, Warrington, and Arthur Fairbourne, Bebington, England, assignors to Lever Brothers Limited, Port Sunlight, England. A detergent product which is in the form of a dry free-flowing powder and comprises a substantially water-soluble polyglycerol fatty acid ester containing unesterified hydroxyl groups, the ester being normally of viscous consistency, in intimate admixture with at least one of the soluble sulfates selected from the group consisting of sodium sulfate, potassium sulfate, ammonium sulfate and magnesium sulfate, the quantity of soluble sulfate being sufficient to constitute the product dry and free-flowing.

No. 2,155,010, Insecticide, Patented April 18, 1939, by Andrew F. Freeman, Hyattsville, Md.; dedicated to the free use of the People in the territory of the United States. An insecticide containing as its essential active ingredient N-nitrosodiphenylamine.

No. 2,155,045, Detergent Composition, Patented April 18, 1939, by Carroll L. Griffith and Lloyd A. Hall, Chicago, Ill., assignors to The Griffith Laboratories, Inc., Chicago, Ill. A corrosion-inhibiting alkaline composition for cleaning zinc, iron and tin ware in an aqueous solution thereof at from cold to boiling temperatures consisting by weight essentially of about 85 per cent of water-soluble inorganic alkaline detergent, about 5 per cent to 7.2 per cent of a solid hypochlorite salt of a metal from the

group consisting of alkali metals and alkali earth metals, and about 9 per cent to 10 per cent of zinc compound from the group consisting of water-soluble zinc salts, zinc oxide, zinc hydroxide and zinc carbonate.

No. 2,155,046, Detergent Composition, Patented April 18, 1939, by Carroll L. Griffith and Lloyd A. Hall, Chicago, Ill., assignors to The Griffith Laboratories, Inc., Chicago, Ill. A corrosion-inhibiting alkaline composition for cleaning zinc, iron and tin ware in a solution thereof at from cold to boiling temperatures consisting essentially of about 85 per cent of water soluble inorganic alkaline detergent, about 5 per cent to 6 per cent of a solid hypochlorite salt of a metal from the group consisting of alkali metals and alkali earth metals, and about 9 per cent to 10 per cent of water-soluble zinc salt.

No. 2,155,141, Emulsifying Agents, Patented April 18, 1939, by Cornelis Maters, Rotterdam, and Martinus Johannes Riemersma, Wassenaar, Netherlands, assignors to Hercules Powder Company, Wilmington, Del. Process of manufacture of an emulsifying agent comprising saponifying with an excess of an aqueous alkali metal hydroxide the resin obtained by extracting pine wood chips with a coal tar hydrocarbon, removing volatile substances from the extract, and removing wood rosin from the remaining solid resinous mixture by extraction with a petroleum hydrocarbon the resin being also characterized by having a methoxy content of about 3 per cent to about 6 per cent, naphtha-insoluble matter about 98 per cent, melting point about 115° C. and acid number about 100.

No. 2,155,504, Disinfecting Means, Patented April 25, 1939, by Wilhelm Neugebauer, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Alba Pharmaceutical Company, Inc., New York, N. Y. A disinfecting and sterilizing agent comprising a higher molecular sulphurion compound.

No. 2,155,630, Tree Spray Oil, Patented April 25, 1939, by John A. Anderson, Olympia Fields, Ill., assignor to Standard Oil Company, Chicago, Ill. An insecticidal tree spray oil comprising a mineral distillate having a Saybolt viscosity of from about 40 to 80 at 100° F., to which has been added about one-half to five per cent of an oil soluble visco-resin.

No. 2,155,914, Bleaching and Sterilizing Agent, Patented April 25, 1939, by Gerrit van der Lee, Deventer, Netherlands, assignor to Naamlooze Vennootschap Industriële Maatschappij Voorheen Noury and Van Der Lande, Deventer, Netherlands. Process of preparing a bleaching and sterilizing agent which comprises reacting ammonia with preformed nitrogen trichloride produced out of contact with the ammonia.

Purifying Alkyl Sulfates

Crude fatty alcohol sulfates are purified to remove inorganic salts by drying the mixture to a viscous mass containing less than 50 per cent of water, adding 1-3 volumes of 98 per cent isopropyl alcohol, evaporating off half the added alcohol, and separating the resulting precipitated inorganic salts from the solution. Standard Oil Development Co. Canadian Patent No. 381,193.

Soap Perfuming

Originality in perfuming coupled with an appropriate name, is the small manufacturer's best answer to the fierce competition in the low-price toilet soap market. A good bouquet has the advantage of being difficult to copy. The best type is built up on amber bases and then made up to some top note of a popular tone, such as jasmin, lavender, bergamot, orange blossom, etc. A good formula for the amber base is:

	Parts
Opopanax resinoid	5
Benzoin Siam resinoid	4
Labdanum resinoid	1
Ethyl cinnamate	3
Diethyl phthalate	4

With this as a base, a bouquet perfume can be built up that will have a lasting value in the tablet down to the last wafer.

	Parts
Amyl cinnamic aldehyde	5
Hydroxy citronellal	2.5
Terpineol	5
Ionone	2
Geranium oil bourbon	2
Ethyl cinnamate	3
Lavender oil	2
Musk ambrette	2
Vetiver oil	1.5
Amber base	5

The following is suggested for an Eastern bouquet:

	Parts
Lavender oil	5
Linalol	5
Bergamot oil	10
Patchouli oil	5
Musk ambrette	3
Vanillin	1.5
Heliotropine	2
Coumarin	2
Oak moss resin	1
Labdanum resin	2
Ionone	8
Cananga oil	1
Amyl cinnamic acid	15
Eugenol	4
Lemon oil	8
Amyl benzoate	3

As a color for the first bou-

quet a salmon tint is suggested, made from $\frac{1}{4}$ oz. of Rhodamine B and 2 oz. of Tartra-phenine. These are dissolved in 32 ounces of water and 4 ounces of the solution added to 28 pounds of soap base. For the Eastern bouquet some coloring matter is essential since eugenol, vanillin etc. darken white soap. For this, $\frac{1}{2}$ oz. of chlorophyll to 28 lb. of soap base will give a pleasant green color. *Manufacturing Perfumer 4*, 123-4 (1939).

ports declined by over 50 per cent in 1938.

Corn oil, an important by-product of the corn products industry, is used almost exclusively as a salad and cooking oil. Our domestic production was reduced in the drought years, and additional supplies were imported. Although the output has increased to above the normal level since 1936, domestic consumption has increased considerably in recent years. The chief contribution of corn to our supplies of fats and oils is, of course, to fatten hogs as the source of our lard supplies.

An average yearly whale oil production of over 500 thousand tons has been obtained by all Antarctic expeditions in the past seven seasons. Domestic production was confined to the West Coast in the 15 years 1921-1935, and averaged less than 5,000 tons annually, while imports in those years averaged 21,000 tons, coming mostly from Norway. An excise tax placed on whale and fish oil imports in 1934 was followed by the advent of American factory ship expeditions to Australia and the Antarctic in 1936 and succeeding years, their whale oil being treated as domestic production. Including relatively small amounts produced at shore stations on the West Coast, the total production averaged 27 thousand tons yearly in the years 1936 to 1938. In addition, an average of 17 thousand tons were consumed from imports, some of which had arrived late in 1934 and were stored in bonded warehouses. Thus our supplies of whale oil, including sperm oil, averaged 44,000 tons yearly since 1936, compared with 26,000 tons annually in the previous years. Hydrogenated whale and fish oils in the United States compete principally with tallow and palm oil in the soap kettle. Fish oil also enters the shortening, paint, and linoleum industries.

Europe Short of Fats

THE principal nations of Europe are on a deficit basis on fats and oils, and an important factor in the desire of several of these nations for colonial possessions

is to obtain access to the rich supplies of oilseeds in Africa and Asia. Large quantities of these raw materials are brought to the crushing centers of Europe, where the oil supplies domestic needs and the rest is shipped abroad. Much of the resultant oil cake and meal is retained at home to augment insufficient domestic supplies of livestock feed. Naturally, the bulk of these oilseed imports are usually taken from colonial possessions, receiving preferred tariff treatment in the mother country.

The United States is a far larger consumer of fats and oils than any of these European countries. A recent calculation by the Imperial Economic Committee in London compared our two million ton consumption of vegetable oils in 1937 with Germany's 719 thousand tons, the United Kingdom's 652 thousand tons, France's 575 thousand tons, and Italy's 533 thousand tons. In addition, we are of course far in the lead of any other country in the production and consumption of lard, butter, and vegetable shortening, and follow Germany and England in margarine output.

In Italy, domestic crops contribute a considerable proportion of the total supplies of vegetable oils, olive oil being by far the most important item. Peanuts, from her African colonies, supply much of France's needs for oils, in addition to domestic olive oil.

Home grown supplies are quite negligible in the United Kingdom, and in Germany do not contribute more than five per cent of the available supplies of vegetable oils. The United Kingdom's imports of fats and oils in 1937 were over 250 thousand tons greater than our record imports in that year. The British imports increased to 1 million 817 thousand tons in 1938, nearly twice those of the United States, and Britain's exports were about the same as ours. Because of lower lard supplies from the United States in recent years, Britain's production of other shortenings and margarine has been greatly increased. During the past five years

their per capita consumption of lard dropped from eight pounds to less than five pounds, while other shortenings increased from less than three pounds to over five pounds, margarine from eight pounds to twelve pounds and butter consumption remained fairly steady at about 25 pounds. Also the production and importation of whale oil has increased so that in 1937 it constituted 16 per cent of fats and oils in soap, 41 per cent in margarine, and 28 per cent in shortening. Over 100,000 tons of whale oil were stored in England last year for reserve defense supplies.

Germany, on the other hand, is the outstanding example of a country that has tried hard to become economically self-sufficient. The Reich has taken a number of steps to try to overcome a traditional shortage of fats and oils. Our lard exports to Germany averaged 150 thousand tons yearly in 1921-24, decreased to 100 thousand tons yearly in the succeeding five years, and to a 67 thousand ton average in the four years 1930-1933. They have now practically disappeared as a market for American lard, principally because of their exchange and barter requirements, the increased importation of vegetable oils and oilseeds, and wider use of whale oil in Germany in the manufacture of margarine. They are the leading margarine producers of the world, with an output twice that of either the United Kingdom or the United States. Whale oil represents over half of all the fats and oils used in the German margarine and edible fat industry. Norway, formerly our chief whale oil supplier, turned to Germany as an outlet following the placing of an import tax in our 1934 Revenue Act, and this oil, diverted to Germany, was a factor in the lower imports of American lard in that country.

The consumption of fats in Germany was placed on a ration system in January 1937, with the aim of reducing consumption to the level of 1913, as the high post-war consumption of fats was considered unnecessary. Domestic production of

animal fats could not be materially increased as this would necessitate the importation of feedstuffs, the domestic grain supply being needed for food.

In attempts to increase supplies of fats and oils, German school children were delegated to gather beechnuts from the forests for the oil mills. Grease traps were installed in drain pipes, the fat and grease content in waste water from restaurants being found particularly plentiful and adaptable for soap manufacture. Hotels, restaurants, and similar establishments in Berlin are required to send their coffee grounds to a factory, where the fatty acids are extracted and soap is thus made from coffee.

Considerable industrial soaps are obtained from coal, which is the raw material for the synthetic production of gasoline and lubricants. During the World War, Germany produced clay soap to rub the dirt off the skin, to save fat-soap. Since then the German cleanser industry has developed a number of chemical compounds containing alkalis and very little fat. Another process, using the fat digesting enzymes in the intestinal glands of animals, yields a washing powder containing no fat. The total saving of fats by the use of washing powders has been estimated at about 100,000 tons annually. A new soapless washing agent is made from the waste liquid remaining after cheese is made from milk.

The German Institute for the Fermentation Trades has been making large scale experiments with the aim of producing an edible fat of a vaseline like consistency from milk fungus, and they are also experimenting with a fat resembling olive oil obtained from yeast. Necessity is truly the mother of invention.

Including the whale oil obtained by their Antarctic fleets as an import item, Germany imported in 1938 the equivalent of 1 million 200 thousand tons of fats and oils, some 66 thousand tons more than in 1937. Exports are negligible. Fats and oils seem to be a necessity, even in a country where substitution is the

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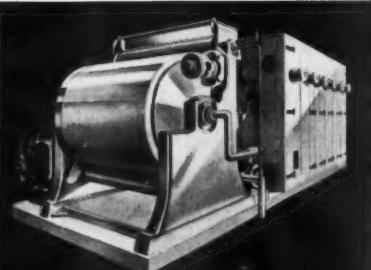
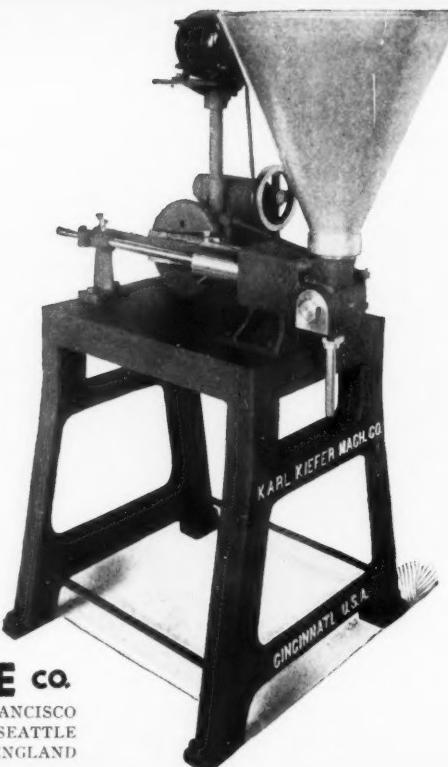
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watchword. The fixed wholesale price for lard in Hamburg in February 1939 was \$34.57 per 100 pounds; the average price for American lard on the open market in Liverpool was \$8.27 per 100 pounds.

We could achieve self-sufficiency on fats and oils if that is considered a desirable goal. No other people in the world are in a more fortunate situation as to food supplies than Americans. Nature has provided us with a country of bounteous and diversified soil and climate, so that we can commercially produce practically every oilseed we have mentioned with the exception of the various varieties of tropical palm nuts. There is no question about our self-sufficiency in edible oils. We are so far in the lead of any other nation in the production of butter, lard, cottonseed oil, and corn that there is hardly any comparison, and this production could be readily and substantially increased. While hog numbers in the Southern States are now on a higher level than for many years, they are at a considerably lower level than in the 15 years 1910-1924.

Crushing the oil from an increased oilseed production would provide employment for workers including those who lost their jobs when mills were forced to close as a result of the cessation of imports of certain types of oilseeds taxed in recent Revenue Acts. We would not be dependent upon imports in the event of war. By raising more hogs, which are a leading medium for converting considerable of the crops of the nation's farmers into something of value, the augmented oilseed crop would produce a surplus over edible needs to supply some of our inedible requirements. Rice bran oil from Louisiana rice mills might replace imports of this oil from Japan, in which country production reached 10 thousand tons last year.

The other side of the picture is that, when gathered for nuts and beans, peanuts and soybeans are classified as soil depleting crops, as are some of the imported oilseeds, and

millions of acres of our farmland have already been damaged by soil erosion. By eliminating imports, we further reduce the export market for our normal lard surplus, as the oils and fats formerly reaching this country would seek an outlet elsewhere. Those that can be used for competitive shortening and margarine would run into a lower price market abroad because of this constriction in markets, and the lessened need for lard would reduce its value to a point where it would not be feasible to export this product. Lard was our principal cooking fat up to the time of the World War. The necessity of shipping vast quantities to our foreign allies greatly diminished the supply available for domestic consumption, and competitive shortenings gained a foothold, which they have held even after it became possible to get lard. The low lard production since 1934 was directly responsible for the greatly increased output of vegetable shortenings, which commencing in 1935, has exceeded federally inspected lard production, and in two of those years exceeded the total estimated lard production (including farm and local slaughter) in the United States. The rapidly increasing lard production at present and the lower price for this product have resulted in regaining some of the ground formerly lost to other shortenings and it is to be expected this trend will be more pronounced in succeeding months. In the past 15 years the combined per capita consumption of lard and vegetable cooking fats has been fairly constant at 22 pounds, with changes in the one being largely offset by opposite changes in the others. In 1938 our per capita is figured at 11 pounds on lard, 12 pounds on vegetable cooking fats, 3 pounds on margarine, and 17 pounds on butter.

Cottonseed oil would have to seek an outlet for any surplus in the lower-priced inedible field, which would further reduce the yield to cotton farmers on a product whose surplus lint already presents sufficient problems. It would probably not be feasible to pay subsidies to

peanut growers to divert part of the crop to oil production, in the face of increased domestic supplies of edible oils. We would have to increase greatly our linseed acreage, grow castor beans, and produce 40 times as much domestic tung oil as at present, or use synthetic substitutes or a less satisfactory oil for varnish.

At the present time we are on our normal surplus basis on edible fats and oils, and in fact are faced with a lard production this year equal to that of years when exports were two to three times our probable shipments abroad in the present year. Our domestic production of edible animal and vegetable fats and oils in 1938 is estimated at nearly 6½ billion pounds—about the same as the 1929-1933 average. Lard production this year will increase more than 300 million pounds over 1938, more than offsetting the expected decrease in cottonseed oil supplies. Some increase also is probable in butter, soybean, corn, and peanut oils, so that the total supplies of domestic edible oils and fats should be about the same as last year. If crop production is about average this year and next, it may be that the total domestic production of fats and oils in 1940 will be the largest on record.

Exports of lard to England are materially increasing as a result of the removal of the former 10 per cent duty in the Trade Agreement. Cuba has developed into our second best lard customer for the past several years, which is also a direct result of our Trade Agreement with that country.

The answer seems to be a diversification of crops, planting those oilseeds adaptable to our soil and climate, and which prove most profitable to grow for domestic use, meanwhile importing those needed for industrial use that can be grown more profitably elsewhere. Then increase our export markets for products we want to sell to nations on the reciprocity basis which is the heart of our Trade Agreement program. History shows that the nations that have prospered are nations that have engaged in foreign trade.

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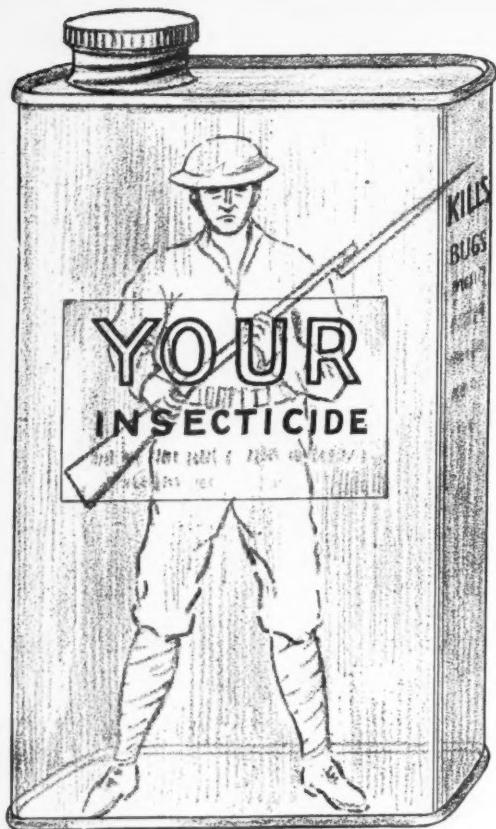
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3 GIVAUDAN'S LINE OF PARATINTS offers a wide and interesting variety of odors and colors for use in scenting para blocks and moth balls in one operation. They are efficient, convenient to use, and low in price. (Paratints are also available without color.)

4 OZONE COMPOUND GD, MEADOW SWEET GD and NEW MOWN HAY GD are the three new fly spray odors which

simulate the odor of fresh, meadow air. They are all produced by Givaudan to meet the demand of fly spray manufacturers for aromatics of the non-perfumery type which impart a distinctly refreshing, wholesome note.

5 GIVAUDAN'S CAMFOSAS is the high quality, low-priced product that is an excellent odor substitute for natural oil of camphor sassafrassy. Its price is not only low, but steady, entirely unaffected by the vagaries of nature and the Far Eastern situation. Our staff will be glad to show you how it can be used in your products with profitable and pleasing results.

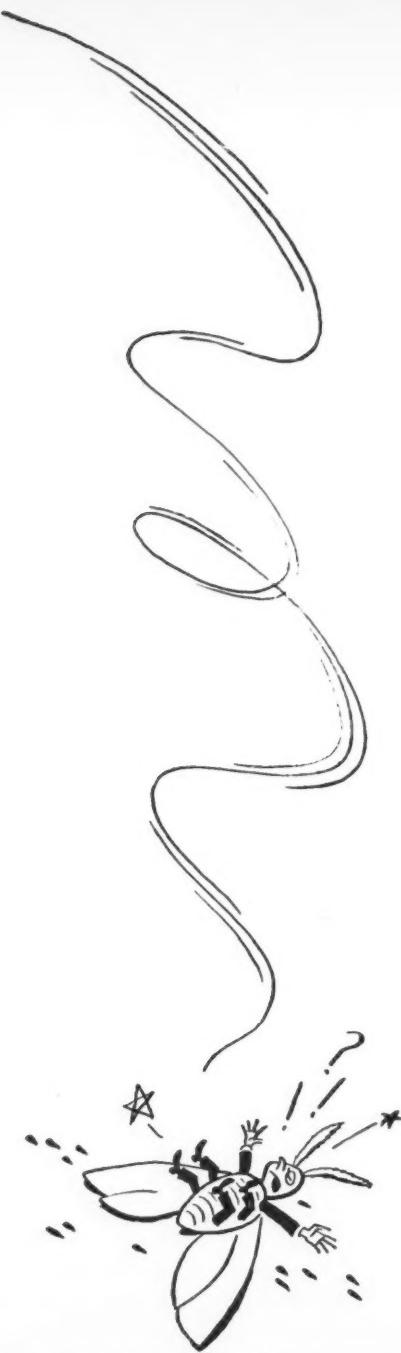
6 GIVAUDAN-DELAWANNA, INC. is constantly bringing out new odors for fly sprays, and is your logical source of supply. Among recent odor developments are several that give excellent results in sprays compounded with pyrethrum or pyrethrum substitutes. Send us a sample of your unperfumed sprays and our staff will demonstrate the effectiveness of these products.

GIVAUDAN DELAWANNA, INC.

80 FIFTH AVENUE

NEW YORK, N. Y.

BRANCHES: Philadelphia Los Angeles Cincinnati
Detroit Dallas Baltimore Chicago San Francisco
Seattle Montreal Havana



FOR PURE PARA-DICHLOROBENZENE, SPECIFY PARAPONT*

"Parapont" Para-dichlorobenzene is offered in six granulations, each of them a brilliant white and free-flowing. Adequate stocks always assure prompt shipment in 100-pound, 200-pound and carload lots. May we submit samples and quote on your next order?

*Trade Mark



E. I. DU PONT DE NEMOURS & CO., INC., ORGANIC CHEMICALS DEPT.

Wilmington, Delaware

D

During the past few months we have taken many of our customers through our several plants to view the interesting phases of the crude drug industry and the manufacture of products of botanical origin--particularly "Pyrefume."

On the occasion of the meeting of the National Association of Insecticide and Disinfectant Manufacturers, June 5th and 6th, we are again arranging to have our visiting customers make the rounds of the Penick plants here.

We look forward to the pleasure of having many of our friends join us at this time.

Pyrethrum--Rotenone--Red Saffron Products Division of

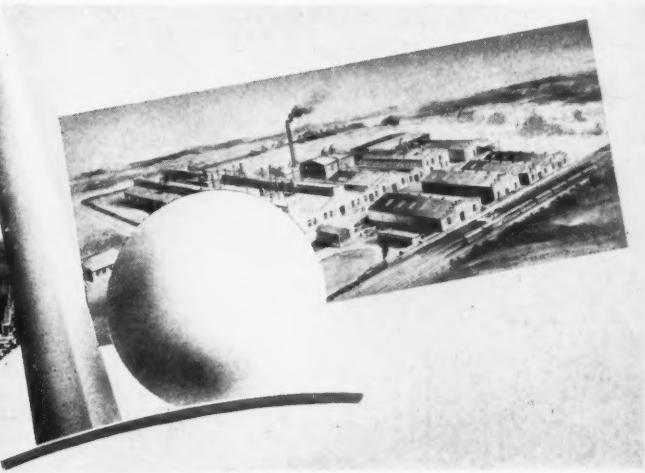
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THE SUMMER QUIZ:

*What to do
About
Flies?*

CONSUMERS get the answer in a face-to-face meeting with a CONTAINER-featured line! ★ Even store strollers swing to cash customers at the flash of these quality signals. ★ It's a fact, sir • "NATIONAL" Container Service does excel in magnetic display of Brand names • new and old! ★ Under clever designs and faultless lithography, "NATIONAL" Packaging is a stand out on any counter!



NATIONAL CAN CORPORATION

SUBSIDIARY OF MCKEESPORT TIN PLATE CORPORATION
EXECUTIVE OFFICES • 110 EAST 42nd STREET • NEW YORK CITY
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NEW YORK AND VAN AMERINGEN-HAEBLER

Welcome and Invite You

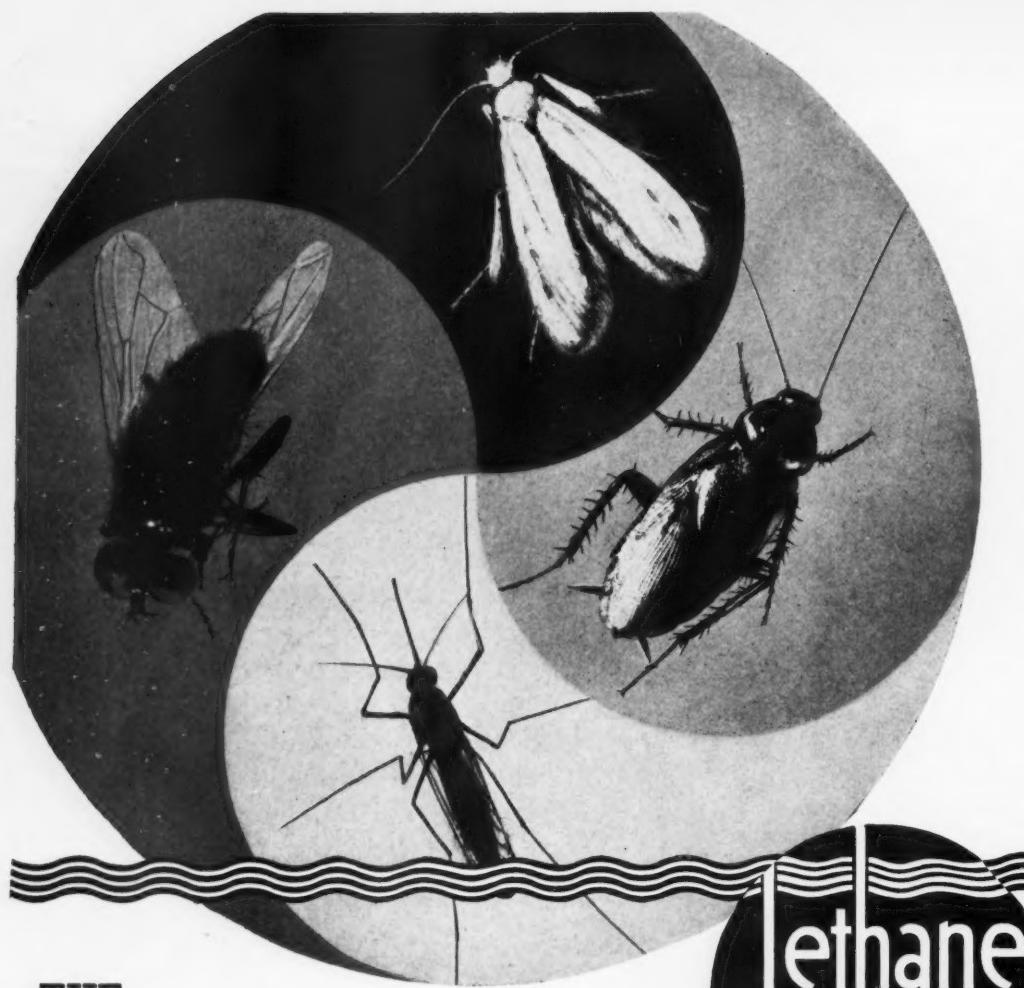


YOU ARE
CORDIALLY INVITED
TO VISIT THE
NEW PLANT AND LABORATORIES
OF VAN AMERINGEN-HAEBLER
WHEN YOU ARE IN NEW YORK
FOR THE N.A.I.D.M. CONVENTION

R. S. V. P.
AND WE WILL MAKE
ARRANGEMENTS TO SUIT YOUR
CONVENIENCE.

A new building has recently been completed on the grounds of the van Ameringen-Haebler works in nearby Elizabeth, N. J., in answer to the demands of increasing business. We have installed the most modern analytical and research laboratories and improved processing equipment, all in the interest of better serving you with aromatics. We are proud of our plant and want you to see it.

VAN AMERINGEN - HAEBLER, INC.
315 FOURTH AVE. NEW YORK CITY



THE OUTSTANDING CONCENTRATE



*Synthetic
Insecticide
Concentrate*

Millions of gallons of insecticides made with Lethane 384 Special are now in customers' hands giving highly satisfactory results. Such widespread use amply confirms Lethane's superior toxicity to both flies and resistant crawling insects.



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222 West Washington Square • PHILADELPHIA, PA.

CHICAGO • KANSAS CITY, MO. • Canadian Agent—P. N. SODEN & CO., LTD., MONTREAL, P.Q., CANADA

10 GRADES OF **SOLVAY** TRADE MARK REG. U. S. PAT. OFF. PARA-DICHLOROBENZENE CUT SALES COSTS

Your sales costs mount if you have a high wastage when you block para-dichlorobenzene . . . your sales costs mount if your packages won't move off the counter!

In your blocking operations, one of these 10 grades of Solvay Para-dichlorobenzene will be exactly the right size for the machine and pressure you are using. The *right size* will insure better blocks, less crumbling . . . less "rejects" at the packaging end.

If you repack in transparent packages, then one of these 10 grades of Solvay Para-dichlorobenzene will prove a best seller . . . because the *right size* Solvay Para-dichlorobenzene will make a more attractive package . . . will push sales for you . . . give your package the preference on the counter.



YOU CHECK THE GRADE...WE'LL DO THE REST

We will send you a sample of the grade you check off . . . send you complete information on Solvay Para-dichlorobenzene . . . or if you are uncertain of your requirements, our technical staff is ready to help you select the most efficient grades for your particular purposes. Try Solvay service! Fill in the coupon now!

1	2	3	5	6	7	8	9	10	11
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SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company
40 RECTOR STREET NEW YORK, N. Y.

Gentlemen: Please send me a sample of the grade of Solvay Para-dichlorobenzene I have checked off, along with complete information.

Name _____

Company _____

Address _____

City _____

State _____

AJ-6

Where can we buy it?

see the new 1939 **BLUE BOOK**



The BLUE BOOK was first published several years ago to supply manufacturers and wholesale distributors of soaps and sanitary chemicals with a complete purchasing guide. Although the text has been materially expanded in recent years to include a great deal of additional helpful information (see below) we have not lost sight of the BLUE BOOK's original purpose. The new 1939 edition contains completely revised and up to the minute information about suppliers of everything manufacturers and distributors of soaps and sanitary chemicals need. Sources of supply listed are headquarters—not branch offices, dealers, etc. Better have a copy on your purchasing agent's desk the year 'round.

A limited number of copies of the new 1939 BLUE BOOK are still available to new subscribers.

The New BLUE BOOK also includes

MacNair Dorland Co.
254 West 31st St.
New York, N. Y.

Send me a copy of the new BLUE BOOK at once. Check for \$3.00 (\$4.00 foreign) covers a year's subscription to SOAP with which I get the BLUE BOOK free.

Name
Position
Company
Address
Business

Buyers Guide — Listing everything readers of SOAP buy,— raw materials, machinery, packaging materials, bulk soaps, sanitary products, accessories, etc., with a comprehensive list of leading suppliers of each item.

Toilet Soap Manufacture — A discussion of manufacturing problems.

Soap Perfuming — A review of the principal types of perfuming materials, with comments on difficulties encountered with each in perfuming soaps.

Glass Cleaners — Composition and use of windshield, window and glass cleaners.

Moth Specialties — A discussion of moth products of the powdered, cake and liquid types.

Hand Soaps — Methods and formulas for the manufacture of hand cleaners.

Wax Polishes — Results of a laboratory investigation of wax polishes, indicating how choice of ingredients affects gloss, hardness of film, water resistance, color, odor, etc.

Specifications — A resume of U. S. specifications for soaps, polishes, waxes, cleaners, chemicals, etc. Specifications of Natl. Assn. Insecticide & Disinfectant Mfrs. for insecticides and disinfectants.

Index to SOAP — Composite index to the monthly issues of SOAP, 1934 through 1938.

Directory of Association Officers, Charts and Tables.



IT COSTS YOU
LESS PER
GALLON...
WHEN YOU USE

Felton Perfumes FOR INSECTICIDE SPRAYS

It is a fact that correct neutralizing and perfuming are paramount factors in marketing successful Insecticide Sprays.

Through years of research, Felton Chemical Co. have developed an outstanding line of perfumes (KEREX SERIES) for use both in sprays made with pyrethrum base or with the newer synthetic bases or combinations. These perfumes (KEREX SERIES) insure correctly neutralized and pleasantly perfumed sprays at unusually economical costs.

WRITE FOR SAMPLES
better, send me a sample of your new
perfumed spray. Our laboratory will
recommend the best and most economi-
cal "KEREX" odor for your product.

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Montreal, P.Q., Can.
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FELTON
CHEMICAL CO., INC.

603 Johnson Ave., Brooklyn, N. Y.

Manufacturers of AROMATIC CHEMICALS,
NATURAL DERIVATIVES, PERFUME OILS,
ARTIFICIAL FLOWER AND FLAVOR OILS.
STOCKS IN PRINCIPAL CITIES.

Say you saw it in SOAP!

Insurance...

UES to the trade association of your industry are one of your cheapest, but most important insurance premiums . . . particularly now, with much ill-advised legislation cropping up in one state after another, the wise manufacturer is not playing a lone hand . . . in the field of insecticides, disinfectants, and sanitary chemicals, he is a member of the National Association of Insecticide & Disinfectant Manufacturers . . . does your firm carry this insurance?



National Association of Insecticide & Disinfectant Manufacturers, Inc.

110 East 42nd Street

New York

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NEUTRACENE

An effective deodorizer for fly spray. Use 1/16 ounce to one gallon of spray to neutralize bad odor . . . then add 1/8 to 1/4 ounce of any one of the following top bouquet odors . . .

ODOCENE

Reliable specialty of proven merit. Pleasant type odor of enduring character.

PETROMA

Floral type, having a pleasing Wisteria background.

FLOCENE

Floral type of attractive character but giving no definite flower impression.

VITACENE

Possesses a clean, refreshing scent. New modern odor. Remarkable coverage without leaving a definite perfume.

VANASPRA

Produces the definite Vanilla types of odor. Suitable for use in bakeries, confectioners, restaurants, etc.

FRUITSPRA

This odor gives results in harmony with the odors around fruit and vegetable stores where perfume would not be desirable.

Theatre Spray Odors

APCO WATER SOLUBLE OILS SERIES "S"

Our laboratories have worked incessantly during the past two years to produce a new line of improved water soluble oils which will remain clear in a water solution. An attractive Theatre Spray may be obtained by using

from 2 to 4 ounces of this water soluble oil to one gallon of warm water. If you cannot find the odor you desire in the following list, write us and our Laboratories will develop the particular type for you.

Bouquet

Chypre

Fougere

Violet

Jasmin

Lemon

Trefle

Narcisse

Rose

Mint

Pine

Lilac

Orange

Oriental

Orange

Blossom

Gardenia

Wisteria

Our Parafumes were produced especially for use in Deodorizing Para-dichlorbenzene Blocks, Bath Salts and Naphthalene Crystal Preparations. These oils are powerful and will penetrate the product uniformly and the odor will last until the Block or Crystals

have completely evaporated. From the following list you will note that our Parafumes contain both perfume and color, but if you prefer the odor without color, we are in a position to supply them without color. We suggest using from 8 to 16 ounces per 100 pounds of Crystals.

CEDAR-PINE
(amber color)

ORIENTAL
(amber color)

LAVENDER
(lavender color)

VIOLET
(violet color)

JASMIN
(amber color)

ORANGE BLOSSOM
(orange color)

LILAC
(lilac color)

NARCISSE
(amber color)

CARNATION
(cerise color)

PINE
(green color)

ROSE
(rose color)

Aromatic Products, Inc.

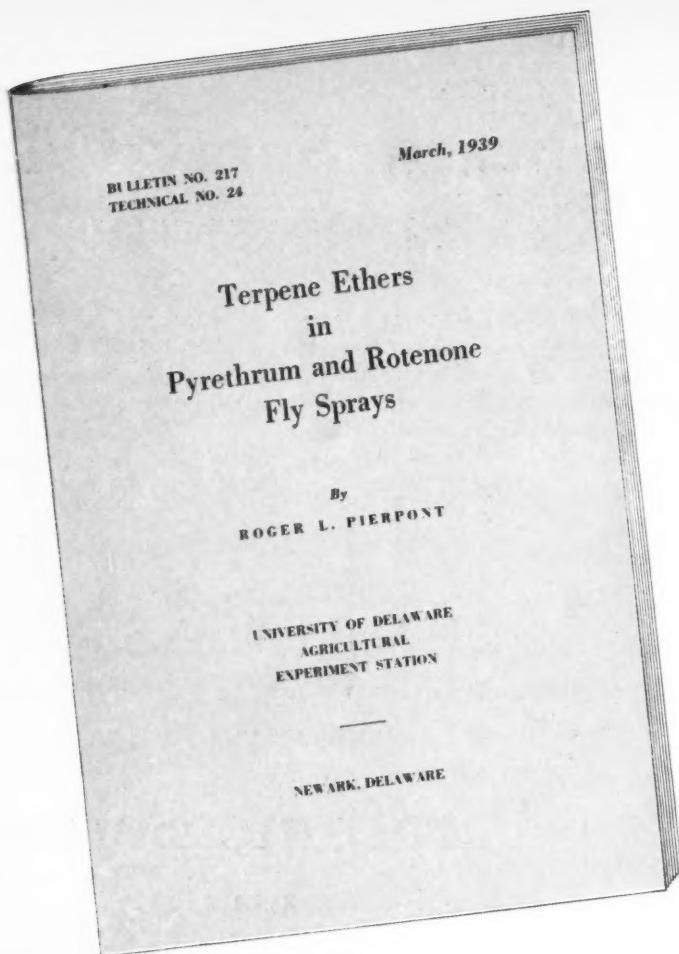
15 East 30th Street, New York City — Factory: Springdale, Conn.

ATLANTA
223 Spring St., S.W.

DALLAS, TEXAS
715 Praetorian Bldg.

PITTSBURGH
727 Grant Building

CHICAGO
205 West Wacker Drive



If You Make Household Fly Sprays You'll Want This Booklet

For months, our advertisements in this magazine have called attention to the improvement of household fly sprays by the use of D. H. S. Activator.* But no advertisement of ours could be as convincing as this new bulletin published by the University of Delaware Agricultural Experiment Station.

*Reg. U. S. Pat. Off. by Hercules Powder Company

Here are marshalled the scientific facts about D. H. S. Activator. Here is definite proof that D. H. S. Activator improves pyrethrum and rotenone fly sprays. We have permission to distribute this booklet free. Write to us for your copy.



HERCULES NAVAL STORES
HERCULES POWDER COMPANY
Incorporated
 961 Market Street, Wilmington, Delaware

CHICAGO NEW YORK ST. LOUIS
 SALT LAKE CITY SAN FRANCISCO

QQ-73

A DISPENSER CAN EITHER HELP...

● The thousands of new grills, bars, lunch rooms that are opening everywhere need Liquid Soap, Dispensers, Disinfectants and other Clifton Products. Packed in drums or cans for the wholesale trade; attractive labels and leaflets ready for your imprint.



OR HINDER
YOUR SALES of LIQUID SOAP

• THE DUODEK SOAPER

will give your customers year in and year out service. When it comes to ability to take punishment the DUODEK doesn't have to take its hat off to machines costing two and three times as much! There are thousands of DUODEKS installed that are giving 100% satisfaction today as they were twelve years ago. The answer is simple: DUODEK has NO springs or intricate parts to wear out, weaken or clog. A promise: You won't miss a reorder on Liquid Soap due to dispenser breakdown, if you furnish DUODEKS!

CLIFTON CHEMICAL CO., INC.
CLIFTON BUILDING, 246 FRONT STREET, NEW YORK CITY

"Quality Sanitary Products Since 1912"

FILL IN THIS COUPON and MAIL TODAY

Clifton Chemical Co., Inc.,
246 Front Street, New York, N. Y.

Please ship dozen DUODEKS at \$11.40 per doz.

Also please quote on the following items we have checked:

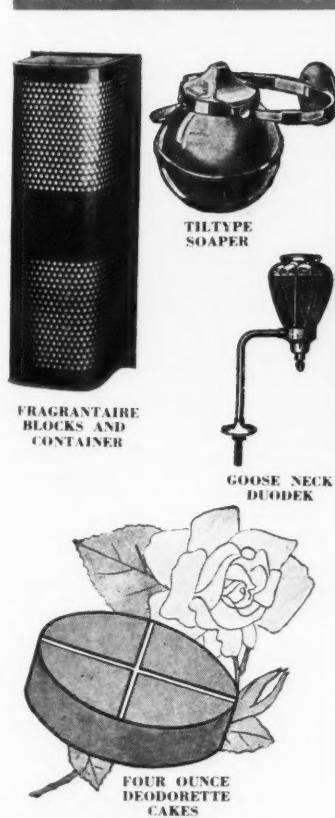
- | | | |
|---|---|--|
| <input type="checkbox"/> Semi Castile Liquid Soap | <input type="checkbox"/> Deodorizing Cakes and Blocks | <input type="checkbox"/> Dazzle Metal Polish |
| <input type="checkbox"/> Liquid Soap Base | <input type="checkbox"/> Deodorizing Block Containers | <input type="checkbox"/> Oil Soap |
| <input type="checkbox"/> Bar OI | <input type="checkbox"/> Coal Tar Disinfectant | <input type="checkbox"/> Shampoo Liquid and Base |
| <input type="checkbox"/> Liquid Floor Cleanser | <input type="checkbox"/> Pine Tree Disinfectant | <input type="checkbox"/> Shaving Cream |
| <input type="checkbox"/> Silver Polish Paste | <input type="checkbox"/> Rub-No Wax | <input type="checkbox"/> Furniture Cream |

(NAME)

(ADDRESS)

Say you saw it in SOAP!

Do you want to see literature describing our 33 different models?



MORE BEAUTY AND DURABILITY

FEDERAL FINISHES

FOR FLOORS

SPECIALIZED FINISHES FOR SCHOOL-
ROOMS — ASSEMBLY HALLS, LOBBIES,
GYMNASIUMS, BASEMENTS, ETC.

Thousands of school floors, as well as those in public buildings, stores, offices, armories, etc., are finished and maintained with Federal Floor Finishes. Comparative tests will convince you of their beauty, durability, ease of application and economy. These outstanding products are the result of many years of research and practical tests. Try them—learn their superiority.



*Sealed, Two Coats Mop-Var. Buffed.
Finished, Two Coats Lightning Lustre.*



BEAUTIFUL, WEAR-RESISTANT FLOORS

Federal Specialized Floor Finishes — No-Burn Gym Finish (the original), Mop-Var—Fed-Co Sealer—Terrazzo Sealer—Var-Lin—Lightning Lustre, etc., cover every range of use in the best possible manner. For utmost beauty, long wear, easy application, economical maintenance be sure to use Federal Floor Finishes. Let us tell you why you can benefit through their use.

SEND FOR FEDERAL FLOOR FINISHING AND MAINTENANCE BOOKS — FREE

FEDERAL VARNISH COMPANY
FLOOR FINISH DIVISION

331-339 S. Peoria Street

CHICAGO, ILLINOIS

USE
BEE
BRAND
DISINFECTANT

for sanitary cleaning
and deodorizing of:



TOILETS



WASHROOMS



SHOWERS



REFRIGERATORS



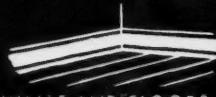
KITCHEN SINKS



FOOD CLOSETS



REFUSE PAILS



WALLS AND FLOORS



TELEPHONES



ASH TRAYS



CUSPIDORS

AT LAST! A DISINFECTANT WITH NO BAD ODOR-NO BURN-NO DANGER

Here's the answer to many a prayer . . . the new BEE BRAND DISINFECTANT . . . a miracle of modern laboratory science! Consider these advantages. It does not burn the skin—even when spilled on the hands, full strength. It is non-poisonous when used as directed—yet it has the full disinfecting strength of the usual carbolic acid solutions. It destroys obnoxious odors (such as those from toilets, garbage or vomiting) almost like magic—yet leaves no noticeable odor of its own. Its low price and high phenol coefficient—8 F.D.A. Method—

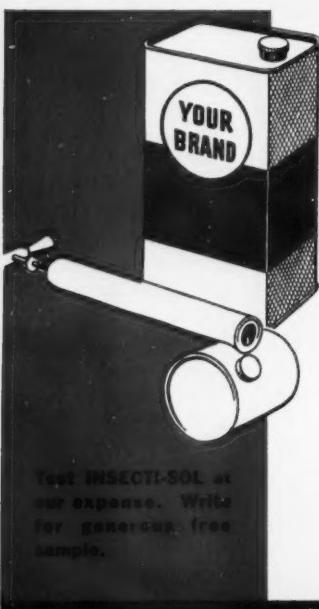
provide a material with high disinfecting and deodorizing properties at very low cost.

BEE BRAND DISINFECTANT is excellent for household use, and for hotels, hospitals, schools, office buildings, industrial plants, institutions, pullman cars, steamships, transport planes, terminals, theatres, restaurants, and other places where disinfectants with strong carbolic, phenol or chlorine odors are unsuitable or objectionable.

For further information write to: The McCormick Sales Co., Baltimore, Md.



A PRODUCT OF **McCORMICK** ALSO MAKERS OF
PYRETHRUM POWDER • DERRIS POWDER • DERRIS EXTRACT
DERRIS RESINATE • ROTENONE CRYSTALS



INSECTI-SOL

- 1 IT STAYS ODORLESS**
- 2 IT IS 100% VOLATILE**
- 3 IT KILLS QUICKER**

If you demand higher quality, lower prices and more effective insecticide—then investigate INSECTI-SOL. It greatly exceeds NAIDM specifications, is priced right, and is completely refined by the most modern methods and equipment. Backed by more than sixty years refining experience, INSECTI-SOL is always readily available in any quantity, from tank cars to a single drum.

Insecticide manufacturers everywhere are increasing sales and reducing costs by adopting INSECTI-SOL for all their requirements. It costs no more than ordinary solvent, yet its quality and effectiveness are vastly superior, and this means a better product with no increase in price.

PENNSYLVANIA REFINING COMPANY

General Offices: Butler, Pa.

REFINERIES AT

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WAREHOUSE STOCKS MAINTAINED IN:
New York, Chicago, Detroit, Los Angeles,
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and Cleveland



PENN-DRAKE PRODUCTS

U. S. P. White Oils and Technical Oils
Petrolatums ... INSECTI-SOL
Waxes... Naphthas... Rubber Solvents
Motor oils and greases ... High flash
lubricants ... Industrial lubricants and
greases

Do you sell to SANITARY SUPPLY HOUSES?

If part of your market is among firms in the sanitary chemical industry which cater to large consumers of soaps and sanitary products—firms supplying buildings, institutions, clubs, hotels, laundries, industrial organizations, etc.—then you can advertise in *Soap & Sanitary Chemicals* to considerable advantage. If you specialize in selling bulk or private brand soaps of any kind, disinfectants, insecticides, polishes, floor products, moth preventives, deodorants, etc., then *Soap & Sanitary Chemicals* is your advertising medium. Base soaps and other partly finished products can also be sold through this publication as can all types of sanitary accessories—mops, brushes, metal receptacles, floor scrapers, mopping tanks, etc.

If you want to find out who advertises these bulk and private brand materials now, look on page 140 for a complete list. Then ask us for more information, specifying the products which you are most interested in selling in larger quantities.

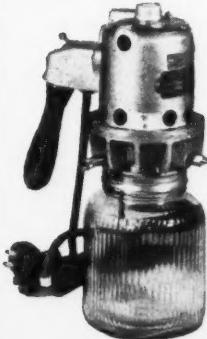
SOAP and Sanitary Chemicals

254 WEST THIRTY-FIRST STREET
NEW YORK CITY

BUILD BIGGER PROFITS

with

Breuer's TORNADO Electric Sprayers



MODEL 53G

**The New Model 53G — LOWEST PRICED
TORNADO Sprayer Ever Offered!**

See it at the Convention

Here is a new, high quality, compressor-type electric sprayer, selling at a sensationaly low price, to help you reach the small users who could never before afford a really good sprayer. Ideal for groceries, delicatessens, meat markets, taverns, hotels, rooming houses, etc.

Check these features: $\frac{1}{8}$ horsepower GE motor, genuine rotary compressor, stationary nozzle, wood pistol grip handle, twenty-five ounce glass container.

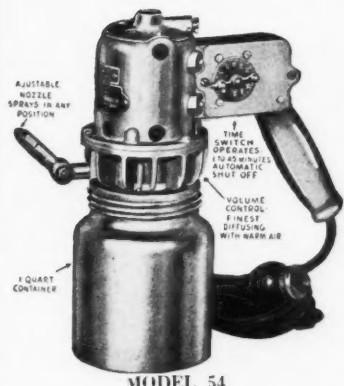


MODEL 53

Advanced design and precision workmanship make these the most effective electric insecticide sprayers ever built. The exclusive, patented Breuer principle does the trick. Finest possible diffusion is obtained, giving the insecticide greater penetrating power and longer floating action than any other method known.

MODEL 53

Beautifully finished castings, adjustable nozzle, air volume control, $\frac{1}{8}$ horsepower GE motor, one quart metal container. A compressor-type sprayer of the finest quality at moderate price.



MODEL 54

MODEL 54

A compressor-type sprayer with automatic time switch. Entirely automatic, simple and safe. Just set the time switch; it sprays the desired quantity and automatically shuts off. $\frac{1}{8}$ horsepower GE motor, adjustable nozzle, air volume control, one quart metal container, twenty feet of rubber covered cable.

MODEL 36

An automatic time switch, compressor-type sprayer. Equipped with one gallon container and $\frac{1}{3}$ horsepower GE motor which has ample capacity for spraying large areas rapidly and thoroughly. Entirely automatic, trouble-free, simple, and safe.



MODEL 50

Free air type unit, $\frac{1}{8}$ horsepower motor, one pint glass container. Sprays oil or water base liquids. Model 51 is similar in construction, but with one quart container.



MODEL 36

Write today for prices and full details.

BREUER ELECTRIC MFG. CO.

5118 North Ravenswood Avenue

Manufacturers of electric sprayers for the insecticide industry exclusively.

Chicago, Illinois

Jussos Adsperge Sapores

I have a little apple-tree
Of choicest kind, most dear to me.

I vowed that I would do my best
To save it from the insect pest.

I bought a book; with ardour keen
I followed out the whole routine.

In autumn with a sticky hand
I fixed its little belly-band;

And then on each appointed day
I said devoutly, "Let us spray!"

To make the little beggars die
I sprayed with caustic alkali;

To finish those that were not dead
I sprayed with arsenate of lead;

Of sulphur too I made full use,
And nicotine's repulsive juice.

I sprayed with this, I sprayed with that,
I ruined trousers, coat and hat.

The bugs, as lively as before,
Lapped it all up and asked for more.

Soon, if they ripen, there will be
Two apples on my apple-tree—
One for the wasps and one for me.

H. C. B.

Reprinted by Permission of "Punch" London

Now this chap may be a poet but can't be much of a gardener.
He would surely have got results had he used the right stuff.

What grieves us is that he didn't try DERRIS DUSTS or
ROtenone SPRAYS. But then it might have spoiled his poem.
Apparently he had not heard of them. That's why we advertise
in "SOAP"—to tell the uninitiated and to remind the experienced
manufacturer of insecticides that the finest

**DERRIS and CUBE POWDERS
DERRIS RESINS containing 25 to 40
percent ROTENONE
DERRIS LIQUID EXTRACTS
ROtenone, C. P. and Technical
FLY SPRAY BASES and other
concentrates made up to order**

are obtainable from

Derris, Incorporated

79 WALL STREET

NEW YORK, N. Y.



ever widening

The market for liquid insecticides made with DEO-BASE is an ever widening one.

DEO-BASE is one carrier which has all the properties vital to increasing the sales of your liquid insecticide. Chief among these are:—

1. Complete freedom from kerosene odor
2. Stability
3. Balanced fractionation
4. Correct evaporation rate
5. A flash point which meets all safety requirements
6. Controlled uniformity

*In your plans for 1939, select **DEO-BASE**
Reg. U. S. Pat. Off.
as your carrier so that your finished insecticide
can be sold everywhere, for use anywhere.*

L. SONNEBORN SONS, INC., NEW YORK

CHICAGO

Refiners of White Mineral Oil & Petrolatum

LOS ANGELES

•
BALTIMORE

Refineries: Petrolia & Franklin, Pa.

•
PHILADELPHIA

Southwestern Distributors: Sonneborn Bros., Dallas, Texas

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A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

N PRACTICALLY every instance, when we look behind the scenes in the case of various state drug laws which are designed to restrict the sale of various products, including insecticides, disinfectants, and other sanitary specialties to drug stores, we see the not-too-delicate hand of state and local pharmacy groups. Under the guise of protecting the public from dangerous substances, the druggists have been imposing on legislators and the public for years, and they continue to do so. They attempt to gain by legislative subterfuge that which they cannot secure by fair competition with the grocery, hardware and other retailers. They want chiefly to legislate business into their stores which in open competition has been going elsewhere. Along with their ever-expanding line of sandwiches, rain-coats, toys, hardware, and what-not, they hope for a sales monopoly on everything remotely resembling a chemical or a drug.

Surprising it is that state legislators do not see through these transparent schemes immediately. They have been tried over and over again,—sometimes with success. Being obviously nothing more than bold attempts to legislate business into drug stores by restricting competitive dealers, it is somewhat amazing that more of these proposed pharmacy bills have not been scuttled by state legislatures on sight. But still they continue to receive serious consideration by state after state, consideration definitely unwarranted in the light of the true facts.

THE California Supreme Court has held unconstitutional a law designed to restrict the sale of products of a chemical nature to drug stores in charge of a registered pharmacist. If there is one court to see behind the real purpose of these drug store restrictive sales acts, there must be others. This is a significant decision. But attempts already are being made to circumvent it by a new law.



WITHIN reasonable limits, effective advertising means sales success. If substantiation of this contention on the part of advertising people were needed today, we could find it in the results of the 1939 house-to-house survey of the Milwaukee market made by the "Milwaukee Journal." The survey which has been made annually for a number of years past by this prominent newspaper embraces a long list of household products, including soaps, cleansers, polishes and the like. Although no close check on actual sales in proportion to advertising expenditures is available, the survey does show unmistakably that year after year those products which are widely advertised, are widely sold. Those which enter the advertising picture, win for themselves a place in the sales picture, and those which drop out of the advertising race, are as a rule not long in fading out of the picture in the race for sales.



J. L. BRENN
Huntington Laboratories, Inc.
N.A.I.D.M. President.

LABELLING and legislation hold the center of the stage as the National Association of Insecticide & Disinfectant Manufacturers opens its 26th annual mid-year meeting at the Hotel Biltmore, New York, June 5 and 6. Leading manufacturers of insecticides, disinfectants, and sanitation specialties from all parts of the country are in attendance. This is the first mid-year meeting of this association to be held in New York in twenty years, the World's Fair being the occasion for breaking the long string of meetings in the Mid-West. Pre-meeting reservations indicate that the attendance approximates 250. The sessions will extend for two days and will close with an informal cocktail party and banquet on Tuesday evening, June 6, in the main ballroom of the Biltmore.

In view of the new Food, Drug & Cosmetic Act, and a great

deal of state insecticide and drug legislation either passed or under consideration this year, the current meeting is centered around a "Question and Answer Clinic on Labelling" being conducted by Dr. H. C. Fuller, technical consultant of the Association, on Monday afternoon. Open discussion of label problems of members is being preceded by a talk by Dr. Fuller on new laws and their requirements. Questions submitted to Dr. Fuller by members in advance of the meeting are being answered and subjected to open discussion from the floor.

Insecticide marketing problems and means for extending the market for insecticides was the theme of the semi-annual report of Harold A. Thomas of the Shell Oil Co., St. Louis, chairman of the Insecticide Marketing Committee, who spoke on "New Markets for Insecticides." Several suggestions for increasing insec-

INSECTICIDE.

ticide sales were made by Mr. Thomas and discussed by the membership. Dr. F. L. Campbell of Ohio State University reported on the N.A.I.D.M. Fellowship at that institution, the more recent work covering testing methods on insecticides for use against crawling insects. In the absence of C. L. Fardwell of McCormick & Co., Baltimore, chairman of the legislative committee, H. W. Hamilton reported briefly on the work of the past six months and stated that the full report of the committee is given elsewhere in this issue.

The afternoon session on Monday calls for two papers from scientists of the Department of Agriculture in addition to the label clinic of Dr. Fuller. Dr. E. R. McGovran is scheduled to read a paper on "The Effects of Knockdown on the Resistance of Houseflies to Pyrethrum Sprays," and W. N. Sullivan a paper on "The Toxicity to the Housefly of Optically Active and Inactive Compounds of the Rotenone Series, Including Some Dihydro Derivatives."

On Tuesday, the program calls for a report by Dr. E. G. Klarmann of Lehn & Fink, Inc., Bloomfield, N. J. on "Collaborative Tests on Disinfectants." Melvin Fuld of Fuld Brothers, Baltimore, will speak on "A Discussion of Testing Self-polishing Waxes," and J. E. Godoy of W. R. Grace & Co., New York, will discuss "Facts About Carnauba Wax."

Page opposite: — The World's Fair is the occasion which accounts for the 26th annual mid-year N.A.I.D.M. meeting being held in New York this year.

DISINFECTANT MANUFACTURERS MEET

**Labelling and legislation hold center
of stage as N. A. I. D. M. opens 26th
annual mid-year meeting in N. Y.**

A. H. Singler, secretary of the Maple Flooring Manufacturers Association, will talk on "Floor Finishes and the Flooring Manufacturer." Dr. Walter H. Eddy of Good Housekeeping Institute will speak on "What Women

Want in Insecticides and Disinfectants."

Speakers on Wednesday afternoon will be Gordon M. Baird of Baird & McGuire, Inc., Holbrook, Mass., on "Unfair Invitations to Bid,"

J. O. Peckham of the A. C. Neilson & Co., New York, on "Continuous Marketing Research," and R. O. Cowin of the Standard Oil Co. of

(Turn to Page 123)



What New Insecticide Laws?

A summary of the legislative situation thus far this year as it affects disinfectants and insecticides—A report with comments from the N. A. I. D. M. Legislative Committee—

By C. L. Fardwell

McCormick & Company

THE 1939 legislative year was approached with much apprehension by manufacturers of insecticides and disinfectants, inasmuch as the legislative calendar called for a regular session of Congress and the meeting of 44 state legislatures. In view of the trend of the past few years toward legislation restricting and regulating business, it was anticipated that numerous bills would be introduced this year to regulate and control almost every type of business enterprise. As far as our manufacturers of insecticides and disinfectants are concerned, three types of legislation have been of specific interest because of their restrictions on many products in this group. These are (1) state insecticide acts, (2) state food, drugs and cosmetic acts, and (3) pharmacy laws aimed to restrict sales of various products to drug stores in charge of registered pharmacists. The original effective date of the provisions of the Federal Food, Drug and Cosmetic Act this year has also added a considerable degree of complication to the legislative situation.

Thus far this year, numerous state legislatures have considered insecticide and fungicide bills as well as food, drug and cosmetic bills, and so-called pharmacy bills which directly affect insecticides and disinfectants sold in the various states. Practically all have required registration and payment of registration fees.

Most have restricted labeling to a high degree. All in all, these bills have been distinctly out of harmony with the federal laws and were obviously burdensome and unnecessary. This Association has consistently and vigorously opposed such of these bills which it has considered unfair and unnecessary, and has attempted to amend other legislation of a drastic restrictive character.

Most of the insecticide bills have either been rejected or sidetracked in the various state legislatures. However, thus far North Carolina and Maryland have adopted new insecticide acts requiring registration, adding them to the list of states which already have these laws on their books. Indiana, Nevada, and North Carolina have adopted new food and drug acts with New York a probability at this writing.

Most of the state insecticide bills which have been introduced this year have been designed primarily to cover agricultural insecticides and fungicides. In order to avoid if possible the inclusion of household insecticides, disinfectants, stock sprays, small-package garden sprays, and allied products under these agricultural insecticide bills, this Association has in every instance offered one or both of the following amendments to the various state legislators, according to the circumstances, aiming to exempt products in the class of household insecticides, etc.

"The provisions of this Act shall not include products commonly used for the control of household insects, such as insect powder, insecticide sprays, stock sprays, and other materials used primarily for the control of insects, vermin and pests, *not of an agricultural nature* or products used in the maintenance of cleanliness and sanitation in the household, factory, institutions, farm buildings, or elsewhere."

"The provisions of this Act shall not include materials which in the judgment of state chemist are non-poisonous such as pyrethrum, pyrethrum extracts, derris, cube, timbo and rotenone-bearing liquids, powders, or solids, or other chemicals, or combinations of any of these substances, provided such products are in full compliance with all statements printed on the unbroken packages containing them, and, provided, that such products are not misbranded or adulterated within the meaning and provisions of this act."

In every instance where it came to the attention of the committee that insecticides, disinfectants, and allied products of sanitation, might be included in the wording of a Food,

Drug and Cosmetic Bill, or in any pharmacy bill, an attempt was made to obtain an exemption for these products by offering the following amendment:

"The term 'drug' as defined in this Act shall not include products commonly used for the control of agricultural or household insects and pests; or, sheep dips, cattle sprays and dips, tree sprays, fungicides, insect powder, naphthalene, or other materials used to control or eradicate vermin, rats, and other pests; or, disinfectants and those products used for cleaning, disinfection and maintenance of sanitation."

Throughout our legislative activities this year the committee has had the legal advice of Mr. Robert F. Wilson and the technical advice on labeling and other problems of Dr. H. C. Fuller. A complete summary of the position of the products of the members of this Association and the labeling problems involved under the new Federal Food, Drugs and Cosmetic Law was recently prepared by Dr. Fuller and sent to our membership. Also, through the efforts of this committee a complete summary of the present status of all state insecticide laws and registration requirements was made up and sent to our members for their guidance.

During the past six months the legislative committee through the Association office has attempted to inform members promptly of each and every piece of legislation which might affect their products as it was introduced in the various states. The committee has likewise used its complete efforts in every instance where the legislation was unfair or ill-advised to have the bill amended or defeated.

Position Under New Drug Law

The committee would like to point out specifically the comments made by Dr. Fuller in regard to the applicability of the various requirements included in the new Federal Food, Drug and Cosmetic Act as they

affect the products of our membership. Dr. Fuller states:

"From the correspondence that I have received it would appear that the insecticides handled by the membership were largely those of a household nature such as for controlling flies, roaches, mosquitoes and so forth, and that the disinfectants were mainly those for repelling insects and as deodorants and cleansing agents around buildings, stables and swimming pools. Such products unless they refer specifically to the treatment of some damaged condition of the body or for removing insects and parasites that might cause disease, would not be subject to the law."

Of course in many cases it will happen that an individual formula be manufactured by several different firms, and the classification of the product solely as an insecticide, or as an insecticide and a drug, will be determined by the claims that are made for it. One firm may label it in such a way that it is solely an insecticide while another may so label it that it will be both household disinfectant and a drug."

You have been advised that the Lea Bill, H.R. 5762, amending the effective date of the Federal Food, Drug and Cosmetic Law, has passed both Houses and is in the Conference Committee. Our last report is that the bill will doubtless become law.

Summary of New Bills

The committee herewith summarizes briefly, the more important state legislation which has received attention thus far this year.

Arkansas: House Bill No. 220—food and drug bill—died in the House.

California: Bills still pending: Assembly Nos. 1018 and 1131, drug bills; No. 1177—drugs and cosmetics; No. 1147 and Senate No. 517—food, drugs and cosmetics; Assembly No. 1830—misbranding and

adulteration of drugs and devices. California Senate Bills No. 792—amends Pharmacy Act, permitting sale of household drugs, etc., through outlets other than drug stores, has passed both Houses; No. 802—amends registration fee under Economic Poisons Law; registration formerly \$50 for 25 products plus \$2 for each brand above that number; amended—registration fee \$50 for 10 products—\$2 for all above.

Connecticut: Bills still pending. House No. 297—re distribution and sale caustic acids and alkalis; first reported killed; then by substitute. Senate Nos. 166 and 167—food, drug and cosmetic bills. No. 166 with a license fee of \$10.00.

Delaware: Recessed to August 1, 1939. Bills pending at recess. Senate No. 79—food, drug and cosmetic bill. We are informed this bill not likely to be considered. House Bill No. 406—a combination veterinary and insecticide bill, which specifically includes disinfectants; \$5.00 registration fee for each registration, annually. Amendments offered and every effort being made to defeat this measure.

Florida: House Bill No. 1092 and Senate No. 624, identical food, drug and cosmetic bills. House No. 1092 has passed the House; Senate No. 624 has been recommitted to the Committee. These bills bear effective date of enforcement July 1, 1939. Still pending.

Georgia: House Bill No. 532—food, drugs, devices bill specifically included household insecticides; protested; killed in committee.

Indiana: Senate No. 173—food, drug and cosmetic bill, is now LAW. Effective date twelve months after date of enactment. Measure was approved March 9, 1939. *House Bill No. 221*—insecticide and fungicide bill—requiring registration; strongly opposed; bill withdrawn. *Senate No. 365*—also an insecticide, chemicals, etc. bill; died in Senate.

Iowa: Senate Bill Nos. 193, 194, 195; also 398 and 399—all restrictive bills; NAIDM amendments offered and under consideration. Still pending.

Maryland: Senate Bill No. 105—insecticide and fungicide bill, is now LAW, effective January 1, 1940. This is the much discussed registration fee bill which NAIDM tried to defeat. Became law and applies to agricultural insecticides and fungicides. Does not include household fly sprays and other household insecticides. Broad use of the term "agricultural" would seem to include cattle sprays, household garden sprays, sheep and cattle dips, disinfectants used for agricultural purposes, etc. Registration fee \$5.00 annually for each product; maximum registration fee \$75.00. This is a typical example of the misuse of the Model Insecticide and Fungicide Bill as discussed at our December meeting. A number of our members feared the model bill might be introduced when not absolutely necessary and result simply in adding another state to the list requiring registration fees. Our committee made it very plain to the agricultural group that it was not our purpose to be a part of any reform move, that the model bill would be a part of our program of defense and introduced only when we were forced with a situation where a bill or bills already sponsored by local interests did not conform to the Federal Act and contained onerous and impractical factors. There was no demand on the part of the Maryland State agricultural group, or any other local interests, for this bill. It was supported and pushed through the legislature by the Manufacturing Chemists Association. However, through the efforts of your committee, household sprays and all insecticides other than those used strictly for agricultural purposes were exempted from the provisions of this measure. Messrs. MacNair and Hamilton came to Maryland and assisted greatly in the fight and modification of this bill.

Maryland: House Bill No. 495—amended Poison Law, provided for coloring of certain agricultural and household fluorides, etc., license fee of \$1. Passed the House and before Senate when legislature ad-

journed. Dead. *Maryland* House Bill No. 250—food, drugs and cosmetic bill—still before committee when legislature adjourned. Dead.

Massachusetts: House Bill No. 75—food, drugs and cosmetic bill. Will not be considered further at this session. *Massachusetts* House Bill No. 288—requiring poison label on package if entire contents consumed at one time dangerous—will not be considered further at this session.

Michigan: Still pending—Senate No. 317, drastic pharmacy act restricting sale drug products. Should be defeated. *Michigan* Senate No. 319—drug and cosmetic bill; *Michigan* Senate No. 460—food, drugs and cosmetic bill—no effective date mentioned. All these bills have our attention and amendments have been offered.

Missouri: Still pending. House Bill No. 604—food, drugs and cosmetic bill; considered very broad; much opposition; reported "do not pass." Senate Bill No. 306—repeals present pharmacy act and sets up a new one, a very broad bill, conflicting with certain provisions Federal Act. Cannot be satisfactorily amended and should be defeated. *Missouri* House No. 596—model form but later included NAIDM exemption; registration fee \$2.00, maximum registration \$25.00. Reported "dropped from calendar."

Montana: Senate No. 53—pharmacy act is now LAW. Regulates practice of pharmacy and sale of drugs, exempting insecticides and fungicides. *Montana* House Bill No. 101—food, drug and cosmetic bill—defeated.

Nevada: House Bill No. 149—is now LAW. This covers adulteration foods, drugs and cosmetics and conforms to Federal law in most provisions. *Nevada* Senate No. 31—compulsory trademark bill; defeated in Senate. *Nevada* House No. 20—pharmacy bill—restrictive measure. Withdrawn.

New Mexico: Senate No. 68—food, drugs and cosmetic bill—died with adjournment.

New Jersey: Still pending—

Assembly No. 245—food, drugs and cosmetic bill intended to bring state law into conformity with Federal law but differs in some provisions; effective date immediately upon passage. *New Jersey* Senate No. 15—this is the amendment sponsored by several associations, groups, etc. to permit more general sale of packaged medicines, household insecticides, etc. Should continue to have strong support.

New York: Assembly No. 584, revision of A. 566—insecticide and fungicide bill—killed. Senate No. 802—registration and sale of insecticides, in form of model bill but NAIDM exemptions included. Passed the Senate and before Rules Committee in House when legislature adjourned. Dead. Assembly No. 279 and Assembly No. 307—consumer bureau bills—reported killed in committee. *New York* Assembly No. 1410—drugs and cosmetic bill, conforms generally to new Federal Act with effective date January 1, 1940. This bill has passed both House and Senate and is now before the Governor. It is marked "30 day bill" which gives the Governor the privilege of signing it in 30 days instead of the usual 10 as it went to him with the general rush of bills for signature just prior to the adjournment of the legislature. It is expected that that Governor will sign this bill.

New York City: No. 534—"Consumers Health Bureau Bill"—still pending. No progress has been made in its consideration; no hearings have been held and it is considered doubtful that anything will be done about it.

North Carolina: Senate Bill No. 369—is now law. This bill was rushed through the legislature and ratified and became law "from and after its ratification"—which was March 31, 1939. Imposes annual registration fee of \$10.00 for each and every brand of insecticide and fungicide; provides that paris green, calcium arsenate, lead arsenate and all other insecticides and fungicides shall bear or contain some identifying added color or medium to

(Turn to Page 121)

Insect Repellents

A study of comparative repellency by the Sandwich-Bait Method using confined house flies

By Dr. Lowell B. Kilgore

Kilgore Development Corp.

THE rapidly increasing importance of insect repellents to the comfort of mankind has stimulated considerable research within the last few years. The technical and scientific literature is replete with descriptions of so-called insect repellents, ranging from household mixtures of unknown composition to fine synthetic organic chemicals. A cursory examination of the literature reveals a serious handicap under which investigations have been made, namely, the lack of a standardized laboratory method available at all seasons whereby the relative efficacy of various repellents can be determined biologically. Consequently, the diversity in character of the substances reported as insectifuges is exceeded only by the number of methods which have been used to show their insectifugal properties.

This paper, therefore, is an attempt to indicate the present position of the literature on insect repellents and contains a proposed laboratory method for relatively evaluating them against a standard insectifuge. The results obtained by the application of the proposed method to some of the more effective insectifuges are included to illustrate its advantages.

Owing to the concentration of attention on the mosquito repellent problem, practically all of the earlier literature on insectifuges concerns outdoor investigations made with various mosquitoes. These investigations were, for the most part, practical exposure tests conducted upon

the arms. For example, Bunker and Huschfelder¹ examined a very extensive list of organic compounds in this fashion, from which study they were able to prepare a table showing an order of relative efficacy of insectifugal power. Mail² made a similar study leading to the conclusion given by Bunker and Huschfelder, namely, that best results were obtained with commercial oil of citronella.

Although correlation between organic chemical structure and insectifugal activity has been a particular object in such studies as the above-mentioned, little, if any, has been shown. It is unfortunate that the extensive data comprising hundreds of organic chemicals tested as repellents are not available for direct comparison. This is due, obviously, to the peculiarity of each set of con-

ditions under which each of the reported experiments was performed, most of which conditions are impossible of duplication. In addition to these investigations, several attempts have been made to develop a method suitable for laboratory use and available at all seasons.

Moore³ showed that a rough evaluation of the intensity of the chemotropism possessed by various chemicals could be demonstrated by exposing baits of molasses-impregnated filter paper to the attack of house flies. These preliminary experiments were conducted in a dairy barn using wild flies. Nelson⁴ used a similar method. Doty⁵ used a bait consisting of a mixture of rolled oats, corn syrup and casein, and incorporated the insectifugal spray under examination in the bait mixture. His exposure was made in Petri dishes to

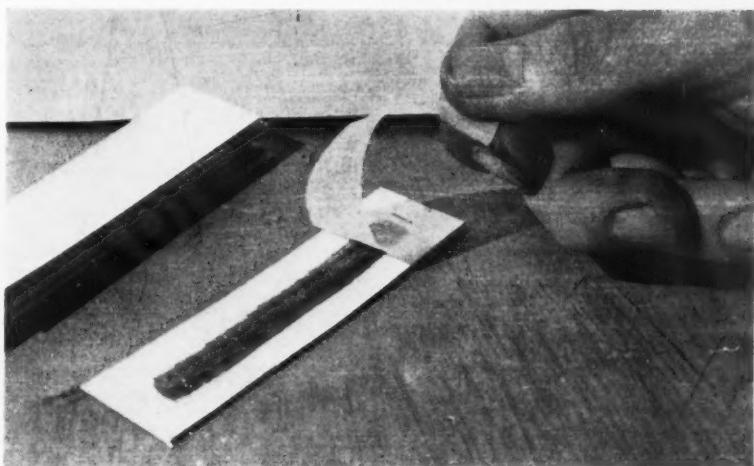


Fig. I—Detail of "Sandwich-Bait" assembly showing porous cover strip.

DIHYDROLIN

(A DIHYDRORETENONE PRODUCT)

for Household, Livestock, Agricultural Insecticides



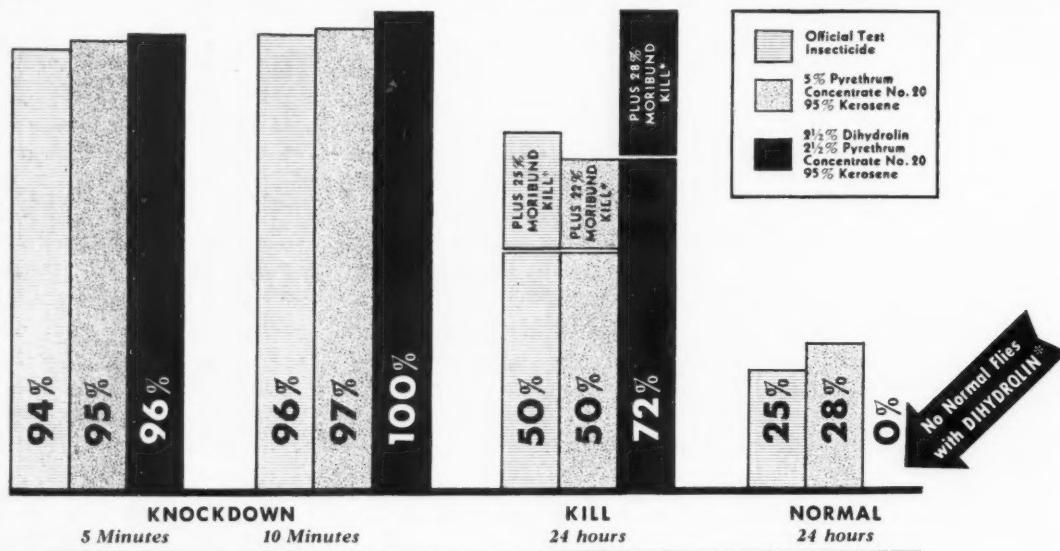
Our Modern Manufacturing Plant

Results from commonly used sprays show normal, moribund,* and dead insects when tested by the Peet Grady Method.



Our Peet-Grady Test Chamber

RESULTS OF TESTS



*U. S. Specification No. 311, paragraph F-7B (2) "MORIBUND FLIES ARE
CONSIDERED AS DEAD."

DIHYDROLIN — MORIBUND KILL . . Once Down . . Forever Out!

Dihydrolin in your Insecticide makes it possible for you to economically meet specifications . . . and **REDUCE YOUR TOXIC COST OVER 35%**

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the loose flies in an insectary. The results were photographed after 8 hours.

Weed⁶ has shown that a fairly good estimate of the repellent effect of insectifuges can be obtained by coating filter papers with molasses, spraying them with the solution to be tested and mounting them on the walls of a Peet-Grady chamber containing 100-200 hungry flies. The number of flies feeding on each of the papers was observed at 15-minute intervals. The mean of the numbers so counted, using several observations, compared to that of the control, gave a ratio which was at least a definite number.

Certain serious variables were found to render the filter paper bait method unreliable. First, it was difficult to impregnate the papers with a reproducible amount of the spray under test by merely atomizing a definite amount onto the papers under fixed conditions. In the second place, the spray tended to penetrate the papers and especially the molasses on the bait so that the effect was masked. It was also difficult to make a photographic record of the papers.

In proposing a laboratory procedure for evaluating insect repellents, it is fully realized that practically all the defects inherent in the laboratory methods for biologically evaluating chemical insecticides are also common to the laboratory insectifugal tests. Although such fundamentals as specificity and involuntary response should be carefully considered, this is not regarded as the province of the present discussion. The details of the method proposed, together with the data which cumulated through its usage are reported here as summations, the reliability of which must depend upon future duplication by other workers.

The house fly (*Musca domestica*) was selected as the test insect for several obvious reasons. First, it is now successfully reared for use in the various insecticide bio-assay methods. Second, it is one of the most difficult insects to repel. It will alight and explore almost anything in search of food. In the third place, because

the house fly is very restless and adventurous, it is ideal for studying involuntary response. On the other hand, it may well be contended that the data obtained by using the house fly could not be correlated in practice because the physiology of the house fly is so very much different from that of piercing or biting insects against which repellents find their practical use. Fortunately, however, the results which have been obtained by this method during four years have been substantiated by other workers using other insects such as mosquitoes and also under outdoor practical conditions. The chief cause of any lack of correlation in outdoor tests is primarily due to the destructive effect of sunlight on organic chemicals used as repellents. Inasmuch as no numerical data are available for outdoor tests, with the possible exception of cattle spray tests, it is difficult to obtain exact correlation. The general agreement which we have found during the four years is regarded as indicative of the reliability of this method.

Repellents may be conveniently divided into two classes: odor repellents and taste repellents. Any test method used to evaluate the repellent effect of a substance must necessarily be based upon the class of repellent to be studied. Although these two classes are not sharply defined, there is ample evidence shown in the two chemotropic effects. McIndoo⁷ studied the odor response of certain insects by means of a specially designed olfactometer. He was particularly interested in attractants, but the same means could be used to evaluate odor repellents. Other and more simplified methods have been reported for studying the tropism of insects to the vapors of chemicals. In the case of either odor or taste repellents the same principle must be used, namely, the insects are lured or stimulated to migrate or feed and are then thwarted from doing so by the physiological activity induced by the substance under examination. The efficacy of the repellent is then gauged by its effectiveness in protecting the lure from the attack of the insects to

which it is exposed, whether a light, chemical vapor, or feeding bait.

The method proposed herein for evaluating insect repellents is based upon the following developments: (a) improvement and standardization of the technique for preparing feeding baits as lures; (b) introduction of a chemical to be used as a standard for the direct comparison of insectifuges; (c) a numerical system of rating any alcohol-soluble liquid as an insect repellent in terms of the standard.

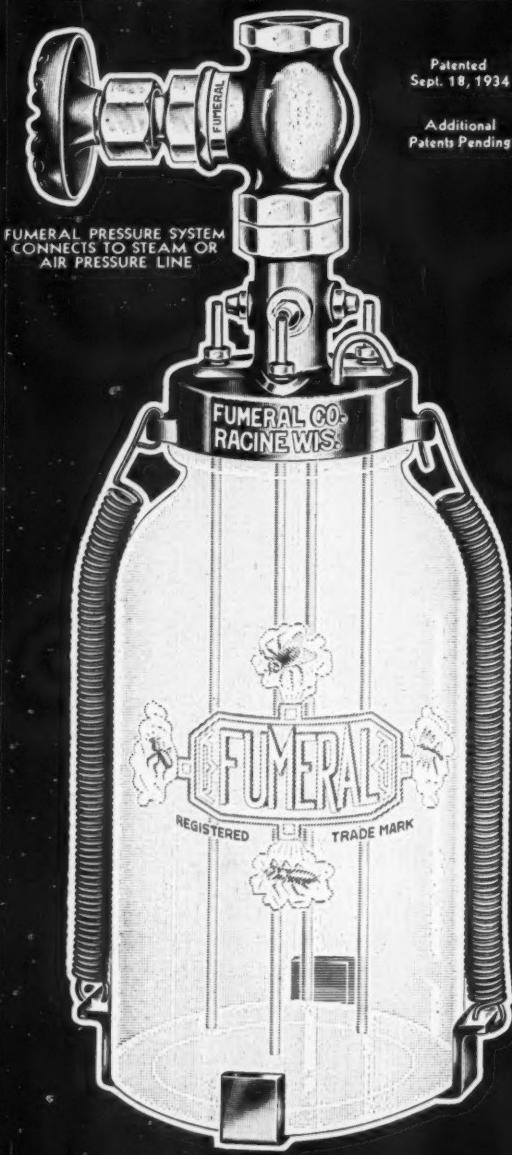
Feeding-Bait Assembly

A smooth, thin film of black molasses is spread on strips of white blotting paper (one inch by four inches), leaving a margin of at least one-quarter inch on all sides. The use of such a margin makes feeding impossible unless the insects are actually on the strips, thus facilitating the counting. These prepared strips are allowed to dry, preferably in a drying over an 30-35° C., until a hard, glossy surface is produced.

After the baits have been so prepared, the object is to shield them from the attack of the flies by the intervention of various chemicals under examination, as was pointed out above. At first, the chemical to be tested was dissolved in a diluent which could be atomized onto the surface of the bait. The use of such a spray gave rise to several serious disadvantages and was found to be inoperative. The principle of the method proposed here which leads to its name, the "Sandwich-Bait Method," depends upon the use of a thin, highly porous cover impregnated with the chemical under examination and superimposed on the bait.

These covers are the same size as the bait strips and are cut from the cushion sheets used in mimeograph stencils. This paper is thin, porous, and highly absorbent. The loose fiber construction of this paper permits the fly to remove the molasses through it from the bait beneath. Although they are not as satisfactory, tissue paper handkerchiefs may also be used for such covers. In order to impregnate these covers uniformly,

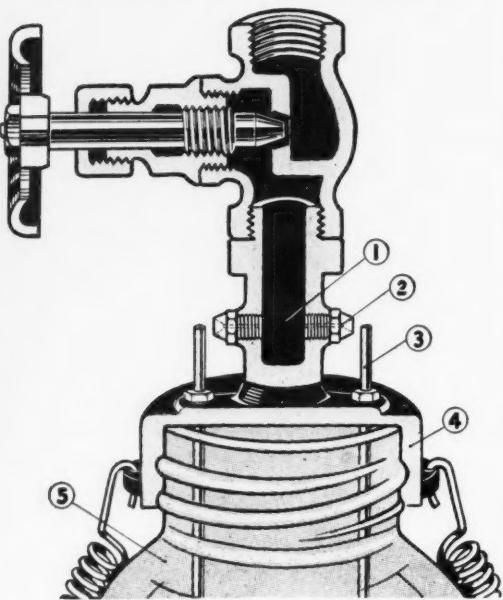
"FUMERAL" INSTANT DIFFUSER



Patented
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Additional
Patents Pending

FUMERAL PRESSURE SYSTEM
CONNECTS TO STEAM OR
AIR PRESSURE LINE

FUMERAL FEATURES



- (1) Pressure chamber. THE LIQUIDS ARE NOT PRE-HEATED. Over-heating takes the killing strength out of pyrethrum products.
- (2) The small area of the special Fumeral pressure release vents accounts for the remarkable low cost of operation for which FUMERAL INSTANT DIFFUSERS are known from coast to coast.
- (3) Readily removable liquid tubes. Easy to clean, simple to adjust, or to replace. No soldered joints. Nothing to get out of order!
- (4) The Fumeral body is made of solid bronze. It is threaded to screw the liquid container in place. Easy and safe to fill and replace.
- (5) No pressure or vacuum is applied to the Fumeral liquid container.
- (6) A Fumeral heavy-duty, bronze, needle-point valve is furnished with each unit. Pressures up to 200 lbs. may be safely used.
- (7) Stationary and Portable Fumeral Diffusers are available in one quart, two quart and one gallon capacities with two, three, or four pressure nozzles. We also furnish Fumeral equipment of one-gallon capacity with six pressure nozzles for vault fumigation.

Sold by leading jobbers since 1932.
We do not sell insecticides or fumigants.

Inexpensive -- Efficient -- Economical

• Fumeral Equipment is Sold by Leading Manufacturers of Insecticides, Deodorants, Disinfectants and Fumigants who also report that FUMERAL Equipment has Increased their Sales.

IT, THEREFORE, WILL PAY YOU TO INVESTIGATE!

FUMERAL COMPANY
RACINE, WIS.

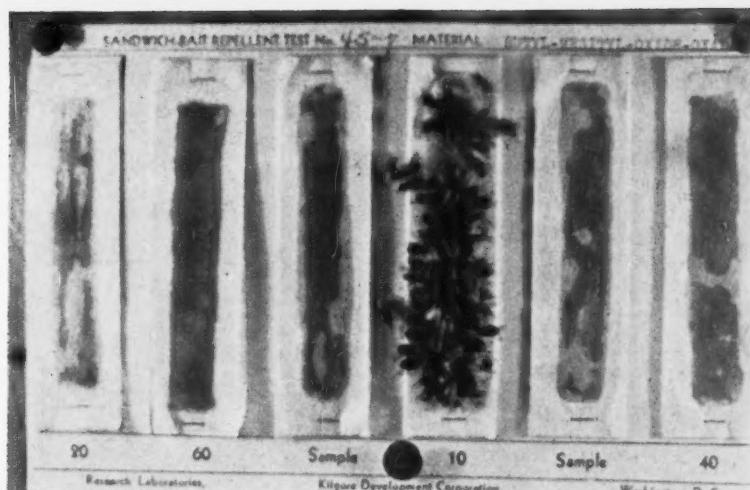
Manufacturers of Fumeral Stationary and Portable Diffusers

Figure II Sandwich-Bait Test

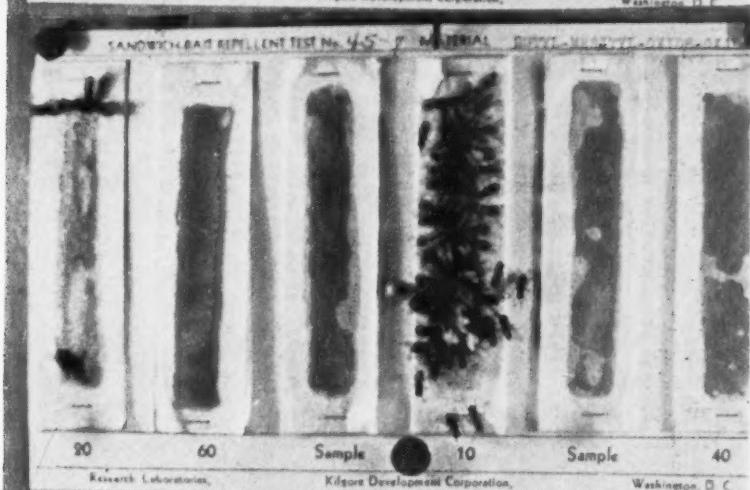
Time-lapse photographs.

(Sample is 10% concentration of Butyl mesityloxide oxalate.)

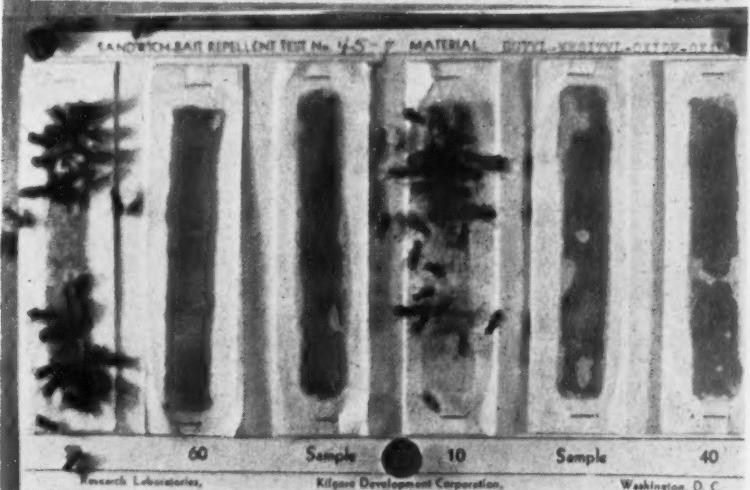
I. After 25 minutes.



II. After 35 minutes.



III. After 50 minutes.



they are immersed in an alcoholic solution of the material to be tested. The excess solution is removed by drawing the cover evenly over a stirring rod as it is lifted from the solution. These covers, saturated with the respective alcoholic solutions, are

hung over a glass rod and permitted to dry for at least six hours in the dark or very diffuse light. The cover papers so impregnated with the chemicals differ little in appearance from the untreated papers except in the cases of high concentrations of essen-

tial oils. After drying, these cover papers are carefully placed over the baits and fastened in place by stapling. In assembling the baits, care must be taken not to press down on the bait or otherwise touch it with the fingers as the molasses is easily

An Insecticide is no better than its ability to penetrate

"D & O" ESSENOL

**Imparts to Contact Insecticides the Essential
Property of Penetration**

For Increased Kill—Decreased Cost

"D & O" ESSENOL, made from specially processed essential oils, is insecticidally active. Its chief value however lies in its remarkable ability to increase the toxicity of the usual insecticide bases by increasing their power of penetration. Pyrethrins and Rotenones provide the necessary toxicity.

Essenol carries it in

Penetration does it

Supplied in two types—"OT" and "OPT"

ESSENOL "OT" (\$2.25 per gallon in drums, F O B New York) has a clean, distinctive odor, requiring no perfume to cover kerosene. 2 parts mixed with 3 parts Pyrethrum Concentrate No. 20 (2 grams to 100 cc) makes a concentrate fully as powerful or more so than Pyrethrum No. 20, with profits increased up to one-third. The mixture may be obtained from us as Pyressenol No. 20.

ESSENOL "OPT" (\$2.50 per gallon in drums, F O B New York). The same as Essenol "OT" except that it embodies a pleasing perfume odor. It may be combined with Pyrethrum No. 20 the same way and with as good results as when Essenol "OT" is used. The mixture may be obtained from us under the designation Pyressenol "OPT".

Send for our pamphlet for full benefits

"We hope to see you at the New York World's Fair in 'The Hall of Pharmacy'."

DODGE & OLcott COMPANY

180 Varick Street New York, N. Y.

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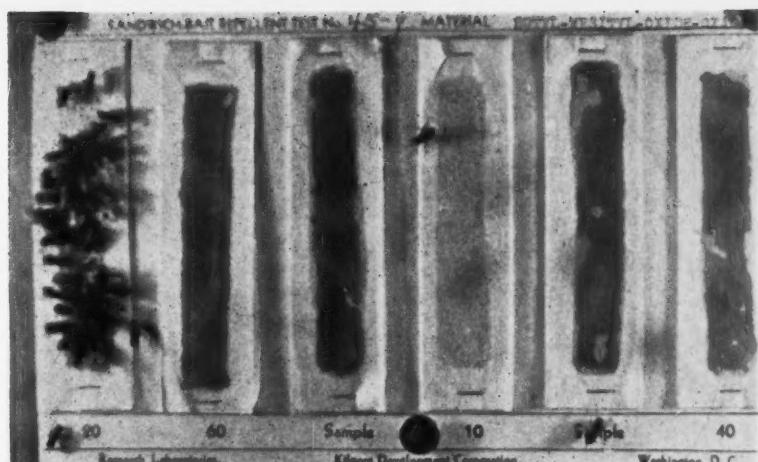
Plant and Laboratories . . . Bayonne, N. J.



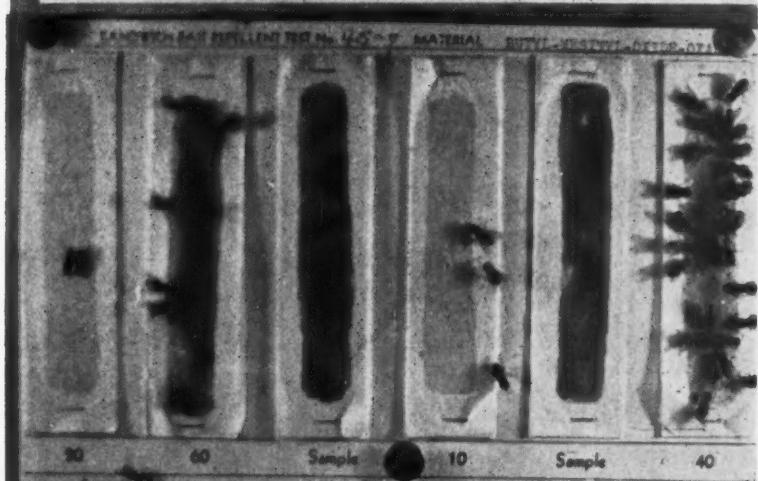
Figure II

(Continued)

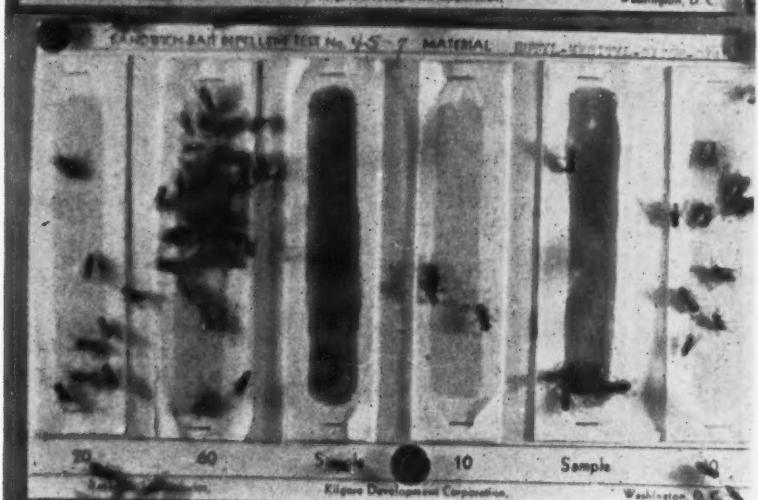
IV. After one hour and 45 minutes.



V. After 4 hours and 30 minutes.



VI. After 6 hours.



forced up through the cover strip. These strips are conveniently fastened by means of a hand stapler which not only fastens the cover strips but also fastens the assembled baits onto a cardboard backing. Care again must be exercised to avoid stapling

through the molasses-covered portion of the bait, which would allow the bait to be attacked through the puncture.

Standard for Insect Repellents

The essential oil, citronella, is perhaps the most widely known mate-

rial used as an insect repellent, particularly on persons. In view of the wide variation of its chemical composition and attendant insect repellent properties, this oil is obviously unsuitable for use as a standard of comparison. However, one of its com-



but who wants to make an entire meal of it? For proper nourishment, a more balanced diet is called for.

Much the same is true of floor treatments. No one denies that a good floor treatment should be durable . . . but why put the emphasis on durability to such an extent that the resulting wax is unduly slippery? Why sacrifice lustre to gain a treatment that's as waterproof as rubber or non-skid as sandpaper?

True, you can make a swell demonstration by stressing one outstanding characteristic. Often it smooths the way for a quick initial order. But what about repeat business?

Balance is just as important in floor treatments as it is in diet. To win a healthy repeat business, a floor treatment must give all-around satisfaction . . . in appearance, durability, waterproofness and non-skid characteristics.

A BALANCED DIET FOR HEALTHY FLOORS

We like to think of Candy's Bright

Beauty Floor Wax as a balanced diet to keep any floor in healthy condition. On the floor, it rivals in appearance those waxes that have made a fetish of gloss, lustre or what have you. In fact, we have said repeatedly: just put Bright Beauty on a prospect's floor . . . alongside a wax that has already proven "eminently satisfactory" . . . and you've practically got an order.

But appearance isn't everything. Candy's Bright Beauty is reasonably waterproof. It will not "milk" in wet weather, withstands damp mopping, yet can readily be removed when it's time to apply a new treatment. Nor is Candy's Bright Beauty excessively slippery. To actually be *non-skid*, a wax would have to be so soft and sticky it would be impractical for use as a floor finish. The happy medium is a wax that creates no difficulties in walking for the average person.

SOLD THROUGH DISTRIBUTORS ONLY

Bright Beauty Wax is sold through distributors *only** . . . never direct to the consuming trade. It is our unalterable policy never to compete with our jobbers. Packed in attractive containers under your own label. Competitively priced to allow you your usual mark-up.

Try Bright Beauty Waxes under your own most rigid tests! Write for FREE experimental sample. No obligation.

* Except for experimental accounts in Chicago, essential to research.

Al Candy, Jr.

CANDY & CO., INC. WAX SPECIALISTS FOR OVER 40 YEARS 2515 W. 35TH ST., CHICAGO

Manufacturers of Prepared Paste Wax, Spirit Liquid Prepared Waxes, Powdered Dance Floor Wax, Concentrated Cream Furniture Polish, Paste Cleaners, Rug Shampoo.

ponents, the alcohol, *citronellol*, can be prepared synthetically by the reduction of its corresponding aldehyde. A commercial grade of this alcohol is suitable for use as a standard insectifuge, as it shows an insectifugal activity approximately equal to that of high grade Ceylon citronella oils and corresponds to the popular conception of citronella oil as a repellent. The particular citronellol* used in our laboratory for this purpose has the following physical properties: boiling range, 117.9° C. at 20 mm. pressure; specific rotation, + 0.97°.

Comparison of Repellents

In order to provide means for evaluating the insectifugal activity, it has been found advisable to prepare six baits mounted at uniform spacings on a five by eight-inch cardboard. Stock solutions of the special citronellol are made up at 10, 20, 40, and 60 per cent concentrations, respectively, in alcohol. The chemical under test, the unknown, is made up similarly at 20 per cent concentration. The six cover slips corresponding to the six baits are prepared as follows: Duplicate cover strips are impregnated with the unknown solution and one cover strip is impregnated with each of the four respective concentrations of citronellol.

Inasmuch as the position in which the baits are mounted with respect to each other on the card is of obvious importance, a definite arrangement must be used in making all tests for evaluation purposes. For example, in all cases reported in this paper the baits are mounted in this order, reading from left to right: 20 per cent citronellol, 60 per cent citronellol, unknown, 10 per cent citronellol, duplicate unknown, 40 per cent citronellol. Note that two baits are prepared using the same unknown in order to preclude any possible effect of position on the card. In addition to this precaution, the arrangement of the baits is made so that the two samples are separated

by the lowest concentration of the citronellol. This is done so that the insects will be equally attracted to the two unknown after the lowest concentration of the citronellol has been depleted. Furthermore, the two higher concentrations of the citronellol are positioned on the other respective sides of the two unknown baits so that any odor from the citronellol will have, as nearly as possible, an equal effect with respect to the two unknown baits.

Observation Technique

It has been found that more consistent results are obtained when the flies are more than five days old. We use a special stock cage for testing purposes, one that will comfortably confine 2,000 flies, into which cage daily additions are made from the residue of stock cages used for Peet-Grady tests. All tests are conducted in an insectary maintained at 80° F. and 60 per cent relative humidity. The humidity appears to have an important bearing on the feeding activity of the flies. In order to obtain the optimum response, the flies should not have been fed for twelve hours prior to testing. They should, however, be provided with cotton soaked with water during the test.

Observations should be made at intervals of at least fifteen minutes. The intervals may be shortened in the case of a compound having a low repellent value. It has been found convenient to record these observations numerically by means of an actual count of the number of flies

feeding on each bait at the time. Such a detailed count is not made in cases where the number exceeds 50, and a value of 100 is arbitrarily assigned when the bait is completely covered by feeding flies. In addition to these observations, it has been found to be of considerable value to make time-lapse photographs at these intervals. This may readily be accomplished with a miniature having a suitable ground glass focusing attachment and permitting 30 to 40 exposures.

Results

The details of the laboratory obtained in the case of oil of pennyroyal is given in Table No. 1. It will be noted that the flies first attacked the lowest concentration, 10 per cent, citronellol protected bait and that this bait was practically depleted before any of the other baits were attacked. Feeding next began on the two baits covered with papers impregnated with 20 per cent oil of pennyroyal and shortly thereafter they also began feeding on the next higher concentration of citronellol, namely 20 per cent. This therefore, indicates that the sample under test, 20 per cent oil of pennyroyal, repelled the attack of the flies under these conditions to the same extent as 10 to 20 per cent of the citronellol used as the standard. Oil of pennyroyal is therefore regarded as having an insectifugal activity of one-half to one when so compared to the alcohol citronellol. (See Table II.)

(Turn to Page 123)

TABLE No. I
Evaluation of Oil of Pennyroyal as an Insectifuge

Time of Observations* (in hours)	Number of Flies Feeding on the Baits						Remarks
	20% Citron.	60% Citron.	20% Penny.	10% Citron.	20% Penny.	40% Citron.	
(1)	(2)	(3)	(4)	(5)	(6)		
0.25	0	0	0	0	0	0	
0.5	0	0	3	50	2	0	
0.75	1	0	12	50	4	0	
1.0	4	0	26	100	14	0	Attacking (3) & (5)
1.25	30	0	50	...	28	0	No. 4 Depleted
1.50	50	0	50+	...	32	0	Attacking (1)
1.75	50+	0	50+	...	50	0	
2.00	50+	0	10	...	50	0	
2.25	30	0	...	...	20	0	(3) & (5) Depleted
2.50	...	0	...	...	7	1	No. 1 Depleted
2.75	...	2	...	...	23	0	Attacking (6)
3.00	...	2	...	...	30	0	

* All observations were made at intervals measured from the time the baits were placed in the cage.

* "Citronellol Extra," Givaudan-Delawanna, Inc., New York, N. Y.

What's the Answer?

PUT IT IN CANS!

Instinctively, experienced production men think of cans when complex packaging problems must be overcome and production costs lowered. They know that cans are sturdier, easier to handle, quicker to fill, pack, and ship—more adaptable for modern high speed operations and, consequently, more economical in the long run.

Consider these important factors and other outstanding advantages, such as complete product protection, greater shelf-appeal—then pack your product in a quality can—made by Continental!

C There is hardly a product that wouldn't be more acceptable packaged in a can—although "knowing how" may sometimes be a matter of laboratory research or package design.

Continental offers complete facilities for determining your requirements. Call upon us anytime.



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WHITE SHOE CLEANERS

**Third of a series of three articles
on composition, production, test-
ing, packaging and equipment.**

By Charles S. Glickman

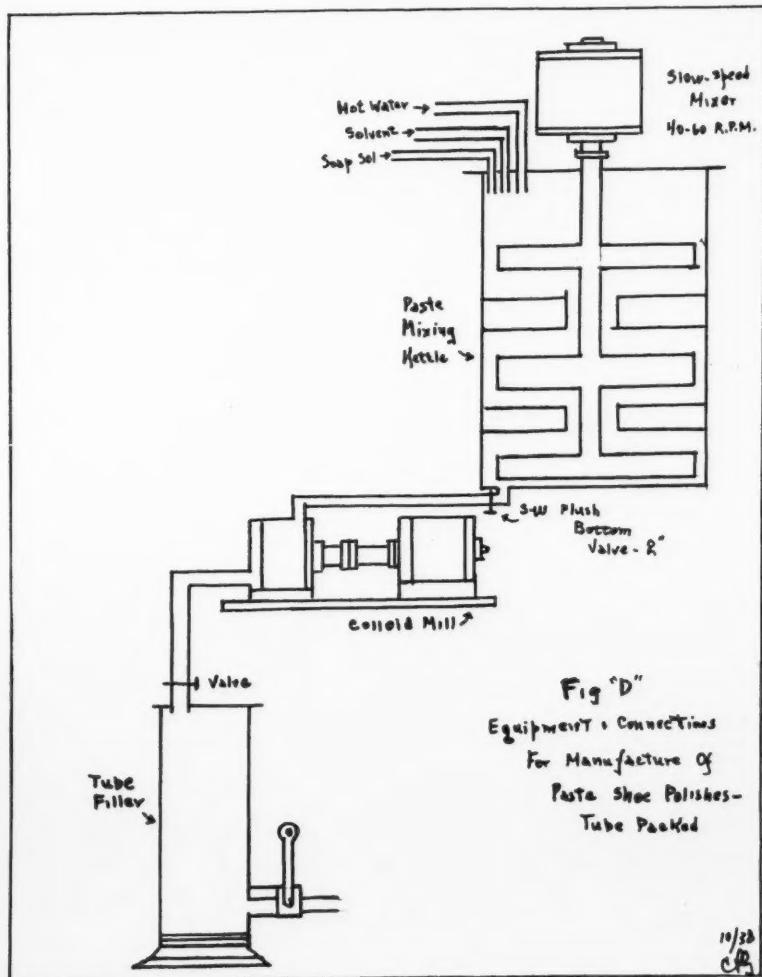
HERE a white shoe cleaner involves the use of a soap solution together with a solvent and a pigment or a gum and a pigment, only a single kettle is necessary. The writer however, favors the use of a separate kettle for production purposes and another for pur-

poses of feeding the filling machine. This enables the production man always to have a batch in reserve and enable the filling line to keep busy without any intermittent stops for material. If for example, a product containing starch, soda silicate, mixed pigments and a solvent is to be made, then the starch, soap and silicate can

be worked up into solution form in a single kettle and the naphtha added through a pipeline. Emulsification and dispersion of the pigment can then be effected by means of a high speed agitator with a subsequent passage through a colloid mill on the way to the filling machine.

The same method and equipment can be used for the preparation of the lacquer type of product. Care must be taken of course that the agitator be equipped with a spark-proof motor as is done even where alcohol is employed. If possible, where two or more kettles are used in the preparation of intermediate solutions, these latter should be set upon a balcony overlooking the main mixing or assembly kettle so that the expense of pumping the solutions from one tank or kettle to another can be avoided.

Let us now look into production methods for pastes or creams. These products which have grown in popularity within the course of the past few seasons are much simpler of production than liquids. A typical set-up of equipment for paste manufacturing purposes is indicated in the Diagram "D." This set-up consists of a kettle equipped with a slow speed agitator of the alternate blade and baffle type and of a size suited to individual requirements. Connecting pipeline feed it with hot water, solvents and soap solutions. The finished paste product can either be fed by gravity into a colloid mill or else pumped into the mill. From the mill, the finished product is fed to the tube filler which in the case of the diagram

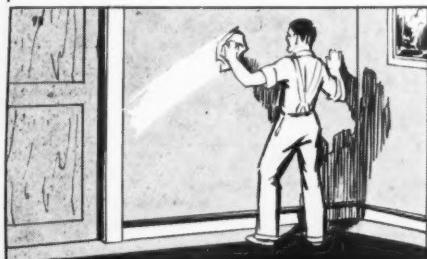


THREE OUTSTANDING PRODUCTS

THAT HAVE PROVEN HIGHLY PROFITABLE TO PROGRESSIVE DEALERS

PENRATE CLEANER

A new liquid cleaner that has remarkable cleaning properties. You will be amazed after trying it. Will not harm the hands, nor will it hurt any surface that water alone will not affect. It is a more rapid cleaning agent for paint, varnish, and lacquered surfaces, as well as for tile, porcelain, stainless steel, aluminum, walls, furniture, woodwork, venetian blinds, window shades, and glass. Removes grease, dirt, soot, and other grime instantly.



Your sample of Penrate is waiting for you. Get it, and you will be surprised how quickly it does the work.



HYPER-WAX

It is not only necessary to know how to compound self-polishing waxes, but it is vital to use the finest raw materials to obtain an outstanding wax.

Consider the following features, and you will agree with us that Hyper-Wax is a superior liquid wax.

1. It is compounded scientifically with special equipment.
2. It contains 18% solids—the wax content being 100% No. 1 refined carnauba wax.
3. Light in color—will not darken light colored floors.
4. Waterproof—will not even come off when washed with a neutral soap solution.
5. Yields an unusually bright luster.
6. Positive traction—reduces slipperiness to a minimum.
7. Excellent coverage. May be used on any type of floor.
8. Exceeds all approved specifications.

Hyper-Wax is available under your own private label.

Write today for a test sample.

D. T. HEAVY DUTY CLEANER

There are many places where the ordinary cleaning material will not work efficiently. For example, on floors that have thick, heavily accumulated, down trodden grease, it requires more than just the ordinary cleansing agent.



D. T. Heavy Duty Cleaner, a solvent powder, has been perfected for that purpose. It penetrates through thick heavy grease, grime, and oil, and cleans both by emulsifying and solvent action. It is entirely soluble in water. Harmless to good paint, and will not hurt the hands nor clothing of the one using it. D. T. has been used successfully under all types of conditions.

It will pay you well to try this excellent cleaner.

A working sample will be sent you gratis upon request.

HYSAN PRODUCTS COMPANY

MANUFACTURERS OF A MOST COMPLETE LINE OF SANITARY SPECIALTIES
2560 ARMITAGE AVE.

CHICAGO, ILLINOIS

is a hand operated type. An automatic filler can be used where production warrants such outlay. In this set-up, however, the product is milled as required since the action of filling the tube machine is an intermittent one.

A typical preparation made in this set-up containing a pigment, soap, soda silicate, perfume and water involves the dissolving of the soap and silicate in the requisite amount of hot water. To this is then added the pigment and perfume and the resultant paste thoroughly stirred. It is then fed through the mill as needed.

The following tables 1 and 2 taken from the literature of an equipment manufacturing company (c) supply the requisite data for tank capacities, vertical and diameter dimensions, type and speed of agitation, horsepower required for individual propellor sizes and speeds and also power required for paddle or paste type mixers. The data for the high speed stirrers is meant for the general type indicated on Diagram "A" (See May, 1939, pg. 107.) with certain modifications according to the exact specifications of the individual manufacturer. No data is supplied for the so-called portable type of stirrer since most technical men are acquainted with power re-

quirements for that type. The reasons why the type illustrated in the aforementioned diagram is used is that there is less chance of undue foam formation with that particular type of agitation. The tables are as follows:

will be of interest to the manufacturer. Colloid mills are essentially high speed grinding machines. They serve to reduce large aggregates into smaller ones or induce intimate mixtures, as in the case of emulsions. The production capacity of a mill is

Table 1

Average Operating Capacity	Tank Dimensions		Power Required		Type of Mixer	
	Diameter	Depth	Heavy		Liquid	Paste
			RPM	Liquid Pastes Blades	Moving	Fixed
36 gals.	2'6"	2'0"	30-60	1	2	2
85 gals.	2'6"	3'0"	29-50	1 1/2	3	3
125 gals.	3'0"	3'0"	28-40	2	4	3
200 gals.	3'6"	3'6"	26-35	3	6	3
300 gals.	4'0"	4'0"	24-33	4	8	3
500 gals.	4'6"	4'9"	20-28	5	10	3
					6	6

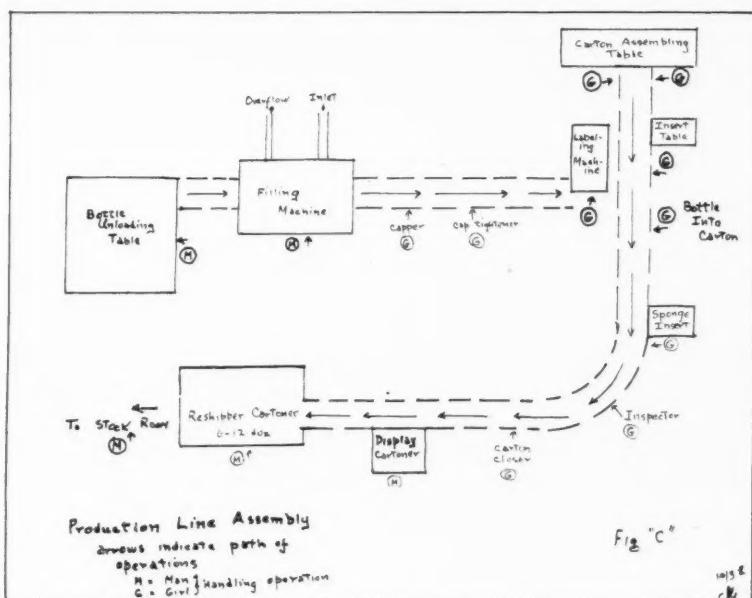
Table 2
As For High Speed Agitators (Fig. A)

Average Operating Capacity	Tank Dimensions		Average Horse-Power Required	Average Agitator Diameter
	Diameter	Depth		
25 gals.	1'6"	2' 9"	0.13	5"
50 gals.	2'0"	3' 1"	0.17	6"
100 gals.	2'6"	4' 3"	0.25	7"
200 gals.	3'0"	5' 0"	0.40	8"
300 gals.	3'6"	6' 4"	0.67	9"
500 gals.	4'0"	6' 9"	1.00	12"
600 gals.	4'4"	6'11"	1.15	12"

In view of the fact that colloid mills are virtually a necessity for the production of good white shoe cleaners whether they be liquid or paste and also that they definitely improve any product not so processed, some details regarding them

therefore a matter of interest as too small production by the mill will necessarily limit the packaging rate. Provision should always be made in the purchase of a mill for a capacity at least 1 1/2-2 times current requirements. These machines as a class have a rather limited capacity which cannot be suddenly increased to take care of unexpected requirements unless they are so figured at the time of purchase.

Because of their relatively high cost however, it is felt that some suggestion is in order which might possibly eliminate this necessarily high expenditure. We have found that for emulsion and other liquid polishes, a high-speed centrifugal can practically accomplish the effect of intimate mixture. This does not necessarily mean that the materials can be dispersed as they can in a mill, but pigments of high enough mesh can be thoroughly mixed into liquids by this means. It is necessary to remember that for this purpose,—production of liquid white shoe



Whole house cleaned...but what difference does it make?



**All shined up for the party?
Yes, but lingering insecticide odors
make the house anything but pleasant.**

YOUR customers and prospects are rapidly learning that an odorless insecticide base is more satisfactory. But if, by chance, some perfume is found desirable, less perfume is required when Ultrasene and not ordinary kerosene is the base. Then, too, after the perfume compound evaporates where kerosene is the base, a stale and musty kerosene odor remains.

This is not true of Ultrasene, whether it is used with or without a perfume.

More and more insecticide manufacturers are turning to Atlantic Ultrasene for their spray base. This is quite natural because Ultrasene evaporates readily, leaves no oily residue, and no disagreeable odor.

Write for liberal free samples of Atlantic Ultrasene. The Atlantic Refining Company, Technical Sales Division, 260 South Broad St., Philadelphia, Pa.

ATLANTIC ULTRASENE

A BETTER BASE FOR
BETTER INSECTICIDES

polishes,—pumps fitted with special bearings should be used. These pumps should likewise be made of iron, with no bronze present to eliminate corrosion effects.

For those readers who are interested in the cost and production capacity of a white shoe polish manufacturing plant similar in size and operation to that illustrated by Figs. "A" and "B," the following information is supplied. With the type of agitators shown, and the size of kettles indicated, the cost of the set of three tanks was approximately \$2000. This is exclusive of the two pumps whose cost was roughly \$75 each and the interconnecting pipes and valves, etc. With tanks or kettles of the same approximate dimensions and capacity but with portable agitators,—two high speed and 1 low speed,—the cost was \$200 for the former and about \$250 for the agitators. The pumps were of 20 gpm capacity, and the agitators of approximately $\frac{1}{4}$ to $\frac{3}{4}$ H.P. each. The capacity of the plant as indicated in the diagrams was some 300 gallons per hour.

For paste products or white shoe creams, a mixing tank of 125 gallons total capacity and an operating capacity of 100 gallons allowed a production rate of some 100 gallons per hour of paste polish. This reduced to 2 and 4 oz. tubes resulted in sufficient prepared polish to fill either some 6400 two-ounce tubes or some 3200 four-ounce tubes each hour. With a mixing kettle of but 50 gallons per hour operating capacity, sufficient material to fill 3200 two-ounce tubes or 1600 four-ounce tubes per hour can be obtained. Tube filling and closing or crimping machinery varies as its production rate of the filled package.

Automatic fillers which also close and crimp the tube have an approximate speed of some 40-50 tubes per minute and require but a single operator to feed tubes to the machine. The filled tubes are placed on a conveyor automatically which brings them to the cartoning section of the production line. The cost of

such an automatic device is about \$3600. If a hand operated filler is used the production rate is some 25-30 tubes per minute and then the filled tubes have to be closed by hand likewise involving another operator and machine. The closing and crimping machine, hand operated, has a capacity of some 20 tubes per minute. The two machines cost some \$225 together.

Let us compare these two machines from a standpoint of hourly production. The completely automatic device will turn out some 2400 to 3000 tubes per hour or handle some 37 to 93 gallons of paste polish hourly. The hand operated machines will handle some 23 to 56 gallons of finished paste per hour. Both devices depending upon the type of tube used. Theoretically, two hand operated fillers and three hand operated closers will produce the same number of finished pieces per hour requiring of course 4 more people to operate them. The difference in initial equipment cost for each,—the automatic and the hand-operated,—is \$3000 in all. Colloid mills used in conjunction with paste production vary likewise according to their hourly capacity. The following figures may be of interest. For supplying the automatic filling machine, a colloid mill of the requisite capacity would cost between \$750-\$1000. For supplying the hand operated machine, a mill would cost some \$400 if the lower production rate were desired. Approximate figures for all types of mills are as follows:

Capacity per hour	Cost
1- 10	\$ 295
3- 30	575
20-500	1050

NOTE: The capacity of a mill usually varies as the viscosity of the material being treated. More viscous materials having lower production rates.

NOW turn attention to the packaging of liquid white shoe polishes. A typical production line for such work is described in Fig. "C." It consists from left to right of a large table where the cartons of bottles are emptied and the bottles supplied to the filling machine. An operator is used for the removal

as well as the filling of the bottles. The machine doing the filling is a semi-automatic vacuum type. The filled bottles are placed on a conveyor along which they are carried past a capper and a cap tightener (motor-driven) to the labeling machine. The filled, capped and labeled bottle is then placed on a conveyor belt moving at right angles, downwards to the other conveyor line. At the upper end of this conveyor, two girls assemble the individual cartons and the filled bottles are inserted into the carton after the latter has had the directions folder placed within. The sponge or applicator is then placed into the individual package and it passes an inspector and proceeds to another girl who closes the individual cartons.

From the latter it passes to the indicated table where it is placed in display cartons of one dozen individual packages each by a man who then replaces the display carton, filled, on the conveyor. It is then brought to the final table where the display cartons are packed in either half-dozens or dozens in the shipper cartons taken from the bottle unloading table and then conveyed to the stock room. Time studies of the production rate as established on a production line as described show that some 175-200 cartons of one-dozen display smaller cartons can be produced during a working day of eight hours. From 110-125 cartons of the larger size package,—5 oz. can also be produced per day if that particular size is being handled. The first rate is for 2 oz. bottles.

Consider production rate from the actual cost of maintaining the production line. Where this particular line was created and operated, the girls received 20 cents per hour and the men 30 cents. This totalled some \$3.50 per hour for labor, or \$28.00 per day. The cost per shipper carton of dozen display packages was then 200 divided by 28 or some 14 cents per reshipper carton. For the larger 5 oz. size, packed in half dozens in the shipper, the cost was some 22 cents per shipper carton.

- HI-TOX 20 -

THE NEW SYNTHETIC CONCENTRATE

EFFICIENT:

UNIFORM:

NON-TOXIC:

STABLE:

Before placing your next order for concentrate, investigate the many advantages of HI-TOX 20—a synthetic concentrate based on the esters of carboxylic acids.

HI-TOX 20 has the same killing principle as pyrethrum and when diluted 1 part to 19 parts of base oil gives a finished product with a grade "A" rating. 1 part diluted with 24 parts of base oil gives a finished product with a grade "B" rating. For a "AA" grade product only six to six and a half per cent of Hi-Tox 20 is necessary.

HI-TOX 20 is manufactured in U. S. from materials produced in U. S. Thus, the closest chemical control is maintained at all times and the buyer is assured an absolutely uniform product.

HI-TOX 20 is non-toxic to warm blooded animals and even a 10% solution is non-irritating. Will not spot, stain or injure any materials.

HI-TOX 20 does not deteriorate with age. Light and temperature have no adverse action on its toxicity.

We will gladly send samples and further information.
WRITE TODAY.

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6243 S. ASHLAND AVE.

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Speed up INSECTICIDE SALES with BENETCO POR-PAILS

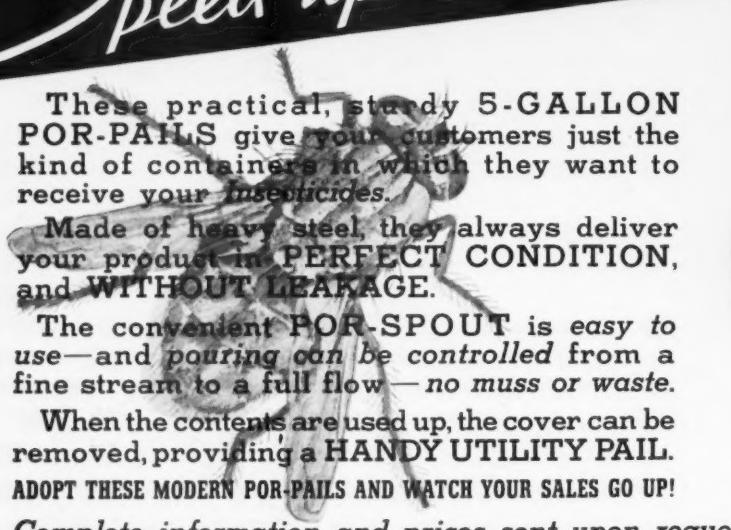
These practical, sturdy 5-GALLON POR-PAILS give your customers just the kind of containers in which they want to receive your insecticides.

Made of heavy steel, they always deliver your product in PERFECT CONDITION, and WITHOUT LEAKAGE.

The convenient POR-SPOUT is easy to use—and pouring can be controlled from a fine stream to a full flow—no muss or waste.

When the contents are used up, the cover can be removed, providing a HANDY UTILITY PAIL. ADOPT THESE MODERN POR-PAILS AND WATCH YOUR SALES GO UP!

Complete information and prices sent upon request!



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Three Modern Factories—Sales Offices and Warehouses in Principal Cities



If it is either desirable or necessary to reduce the cost of the package as well as the cost of packaging, a label with printed directions can be employed, thereby eliminating the necessity of inserting a separate folder in the package. Individual cartons for each bottle can also be eliminated and the bottles packed directly into dozen display cartons after labeling. Both of these practices are to be found with several products on the market today.

TESTING and analyses briefly touched upon as of some importance to firms which maintain a chemical staff. The polish being examined should first be centrifuged, if a liquid, and a preliminary test made upon the separated pigment and solution. This procedure can then be elaborated into a quantitative procedure by evaporation of the volatile content or distillation. From tared amounts of the unknown, it is easy to resolve both of these general components.

The finished product should also be tested for performance on the shoe by means of a photoelectric device for measuring the relative degree of whiteness or light reflecting power. Such devices are commercially available. Other tests which can be made to determine all the characteristics of the product or competitive products are as follows:

- 1—Degree of whiteness.
- 2—Character of the finish, smooth, mottled, streaky, etc.
- 3—Degree of dirt removal or detergency.
- 4—Effect on the leather of the polish, stiffening, etc.
- 5—Ability to buff the polish to a gloss.
- 6—Degree of adhesiveness.
- 7—Ease of reshaking the sample.
- 8—Preservation of the nap on rough leathers.
- 9—Smoothness of paste products.
- 10—Stability of emulsion, if an emulsion.
- 11—Reactivity with the container, if tubed.
- 12—Non-interreactiveness of the polish components.
- 13—Ease of application.
- 14—Water resistance of the dry polish film.
- 15—Pleasantness of odor of the contents.

16—General appearance of the package and contents.

These tests are general ones which need no further explanation or discussion since they are quite self-evident.

A CONSIDERATION of the factors in packaging and sales closes this discussion. Opinions in regard to the matter of bottle designs, applicators and polish characteristics are personal ones. Consider first the subject of package sizes and prices before proceeding to the former subjects. Packages,—liquid, are usually found to be from 2 to $2\frac{1}{2}$ oz. in size for the smaller one and 5 oz. for the larger. The price for such packages ranges from 10 cents for the small size to usually 25 cents for the larger size. Tubes on the other hand sell from 10 cents for the $1\frac{1}{2}$ to 2 oz. sizes and about 20-25 cents for the $3\frac{1}{2}$ to 4 oz. sizes.

With regard to the design of the bottle, much can be said. The "standability" of a bottle of white shoe polish is of prime importance. It seems that what was once referred to as the "law of cussedness," that law governing the action of a falling slice of bread which invariably lands with the buttered side downwards, also plays an important part in the behavior of white shoe polish bottles. *They invariably tip over.*

It is the writer's belief that a valuable sales point has been overlooked with regard to this. A low pyramid-shaped container would be both practicable and attractive. It would prevent such accidents as that described and would earn a measure of thanks from users. It would furthermore enhance the appearance of the contents since there would not be as large a space of unpigmented liquid to be seen.

The subject of applicators is also an apt one. The problem of supplying a good applicator is important as an improper one will destroy the real effectiveness of an excellent product. The variety of applicators which can be used is large, but the good ones are few.

There are brushes, swabs, cloth and mohair pads, as well as sponges both natural and rubber. Tests made with all types have shown that mohair applicators, rubber backed, are the best kind for liquids on smooth leathers and on nappy ones. A short bristled brush is best for tube or paste products since it enables the product to be spread with greater ease if used in its concentrated form or if used in its dampened form. Mohair seems to retain the concentrated product and prevent its easy solution during application. Sponges and towelling swabs are clumsy to use and soiling to the hands.

For purposes of determining some measure of consumer requirements, a study was conducted in two different parts of the country in an effort to ascertain certain important factors. This study was based upon comparative comments elicited after various types of white shoe polishes were used. One definite reaction that was strongly apparent in almost every case was that the user wanted a polish which was concentrated and capable of producing a heavy film. The majority of users preferred *a paste product which was usable in its original concentrated form*. The user wanted to cover all dirt marks so that they would stay covered.

When we come to realize that the greater part of the commonly encountered liquid polishes contain but the barest minimum of pigment, and a pigment at that of poor, if not negligible whiteness and hiding power, then the reason for the trend to paste products becomes more evident. In closing, therefore, it is the writer's opinion that stress should be laid upon the creation of polishes of increasing adherency and more intensified whiteness.

Note: All portions of this text are based upon original research with the exception of those portions noted.

(a) White Shoe Cleaners, by Ralph H. Auch—"Soap Blue Book," 1938 edition, Page 125-126-127.

(b) White Shoe Cleaner Formulation, by Harold A. Levey Chemical Industries, Feb. 1937., page 169-170.

(c) Literature of the Struthers-Wells Company, Warren, Pa.

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4

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Insecticide Laws

(From Page 102)

differentiate them from foods or feeds and thus prevent poisoning. *North Carolina* Senate No. 232 is now law. Food, drugs and cosmetic Act was ratified April 3, 1939; effective January 1, 1940. Conforms generally to Federal Act.

Oklahoma: Senate No. 219—food, drugs and cosmetic act—killed.

Pennsylvania: Still pending. *Pennsylvania* House No. 423, bill amending present insecticide and fungicide law allowing out-of-state manufacturers to register their products, has passed both Houses. Your committee worked diligently in behalf of this bill and through the efforts of our good friend, Dr. Robert C. White, who is City Comptroller in Philadelphia, the Pennsylvania Retail Grocers Association, National-American Wholesale Grocers Association and the Philadelphia Drug Exchange, we were successful in getting this bill through both Houses. We are hopeful it will be law by the time this report is published. This amendment will eliminate all the distressing experiences we encountered in Pennsylvania last year. Henceforth the manufacturer will deal directly with the Department of Agriculture in registering his products. *Pennsylvania* House No. 709—a drug and cosmetic bill—passed the House. This measure deals with prevention of adulteration, misbranding, false labeling, etc. Still pending. *Pennsylvania* House Bill No. 1358—still pending. This is an extremely drastic "consumer type" measure which cannot be satisfactorily amended; covers misbranding, adulteration, etc. of drugs and cosmetics; has registration fee but no amount set—left to discretion of department administering its provisions. Should be defeated. *Pennsylvania* House Bills Nos. 727 and 728—extremely drastic restrictive sales bills. Still pending. Cannot be satisfactorily amended. Last report bill still in committee. Should be defeated.

Tennessee: House No. 664 (same as Senate No. 499)—food,

drugs and cosmetic bill—died in the House. *Tennessee* Senate No. 386—amendments to pharmacy law—defeated in Senate.

Texas: House Bill No. 225—food, drugs and cosmetic bill, containing many unworkable provisions; considered favorably by the committee to which it was referred. Attempts made to amend this bill to bring it into conformity with Federal Act and manufacturers and distributors in Texas have been fully informed and are using every effort to have this bill amended satisfactorily. We have received the following report on this measure from Mr. Sam Hanna, Secretary of the Texas Wholesale Grocers' Association: "H.B. 225, seeking to amend our present State Pure Food Law, will not be brought up before the House by its author and therefore is definitely killed."

Utah: Senate No. 20—food, drugs and cosmetic bill—killed in Senate.

Washington: House Bill No. 276—regulating sale of insecticide and fungicides—died in House. Washington Senate No. 15 and Senate No. 315—food and drugs acts—died in Senate.

West Virginia: House No. 43, penalizing improper labels on drugs and cosmetics—killed in House. Senate No. 21—died with adjournment of legislature.

Wisconsin: Assembly Bill No. 785—uniform food and drug act to repeal certain sections of the present food and drugs act. Hearings to be held on this measure on May 18th. Still pending. *Wisconsin* Assembly No. 595—amendment to the Pharmacy Law with the definition of drug as used in the food and drug laws; this is a drastic restrictive measure with registration fee of \$1.00 for each place of business and several restrictive provisions. This bill is sponsored by the Wisconsin Pharmaceutical Association and if passed will confine the sale of the products of members of this Association to drug stores having a registered pharmacist. Strong opposition is being brought to bear to defeat this measure.

Theater Sprays

The main function of theater sprays is to impart a refreshing odor. Such preparations should be inexpensive, neutral and non-reactive to metals, and should possess a clean hygienic type odor. Germicidal activity is desirable. These sprays are of three types, that base on alcohol, on sulfonated castor oil, and perfume oil in a soap emulsion. Examples of the first type are as follows:

	parts vol.
1. Pine needle oil	10
Formaldehyde	10
Acetone	30
Denatured alcohol	50

	parts vol.
2. Menthol	3.0
Tincture benzoin	5.0
Cinnamon-leaf oil	3.0
Bornyl acetate	1.0
Lemongrass oil	10.0
Safrol	2.5
Distilled water	10.0
Denatured alcohol	65.5

A representative formula with a basis of sulfonated castor oil is:

	parts vol.
Sassafras oil	1.5
Bornyl acetate	2.5
Pine oil, steam dist.....	3.5
Rosemary oil	1.0
Spike lavender oil	0.5
Geraniol	1.0
Sulfonated castor oil	60.0
Distilled water	40.0

A general formula for a soap-base spray is as follows:

	parts vol.
Perfume oil (pine, lemon type, etc.)	45.0
Oleic acid	3.0
Triethanolamine	1.5
Distilled water	50.5

A standard formula for a telephone disinfecting fluid contains alcohol and soap tincture:

Thymol	1 gram
Pine-needle oil	15 drops
Peppermint oil	15 drops
Denatured alcohol	5 cc.
Tincture of green soap	10 cc.
Water to	50 cc.

S. P. Jannaway. *Perfumery & Essential Oil Record* 30, 87-92 (1939).

Improved Waxes

The properties of natural waxes are improved by treatment with hydrogen at 100-150 atmospheres' pressure and 200-220° C. in the presence of a catalyst such as that of a cobalt or nickel type. I. G. Farbenindustrie A.G. German Patent No. 665,535.

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Rotenone Dusts

Dusts made from the powdered roots of *Derris elliptica*, *Lonchocarpus* sp. (cubé) and *Tephrosia virginia* (diluted with clay to give uniform rotenone concentration), were tested by a laboratory method on the imported cabbage worm. No difference was noted in the first two when the percentage of rotenone and total extractives were nearly equal. *Tephrosia* dusts showed considerable toxicity with indications that a dust coarser than 60 mesh was less toxic. C. B. Wisecup. *J. Econ. Entomol.* **31**, 700-3.

Mosquito Repellent

A mosquito repellent has been prepared in the form of a non-irritating vanishing cream containing ingredients which repel mosquitoes for several hours after application. Tanglefoot Co. of Grand Rapids, Mich., puts it up in pocket-sized collapsible tubes.

Insect Repellents

(From Page 111)

Attention is called to the sharp differentiation in the attack by the flies caused by the variation in the concentration of the citronellol. When the bait protected by 20 per cent had been depleted they migrated across all the other baits to the other extremity of the card to feed on the next higher concentration, 40 per cent. This was again the case when the bait protected by 40 per cent citronellol was depleted.

Table No. II is a compilation of several chemicals which have been tested in this manner and arranged in order of increasing efficacy. The third column contains an imperial ratio of efficacy compared to the citronellol standard calculated as above.

Summary

A laboratory procedure has been developed for evaluating liquid materials soluble in alcohol as insect repellents using the housefly as the test insect. The method consists in (a) preparing uniform baits using brown molasses as the lure; (b) thwarting the attack of flies when the baits are exposed to them in a cage by superimposing on the bait a porous paper cover impregnated with the material to be tested to form a sandwich; (c) introduction of the chemical citronellol as a standard insectifuge. Some results obtained by this method are included illustrative of the applicability of the proposed procedure.

References

- ¹ Bunker, C. W. O. and Huschfelder, A. D., Amer. J. Trop. Med., 5, 359-383 (1925).
- ² Mail, G. Allen, Montana State College Agr. Bulletin, 288 (1934).
- ³ Moore, Warren, J. New York Entomological Soc., 42, 185 (1934).
- ⁴ Nelson, F. C., Soap, X (2), 79-81 (1934).
- ⁵ Doty, A. E., Soap, XII (4), 97-103 (1936).
- ⁶ Weed, Alfred, Private communication to the author.
- ⁷ McIndoo, N. E., J. Agr. Research, 46 (7), 607-625 (1933).

TABLE No. II

Compound (at 20%)	Concentration of citronellol	Value
Terpenyl acetate	< 10	½
Butyl benzoate	< 10	½
Camphor	< 10	½
Benzaldehyde	10	½
Furfuraldehyde	10	½
Banzylamine	10	½
Diethylene glycol monoethyl ether acetate	10-20	½-1
Menthol	10-20	½-1
Benzophenone	10-20	½-1
Diethylene glycol monobutyl ether	10-20	½-1
Oil of pennyroyal	20	1
Diethylene glycol monobutyl ether acetate	20-40	1-2
Amyl salicylate	20-40	1-2
Triethanolamine	20-40	1-2
Butyl mesityl-oxide-oxalate	> 60	..
Butyl mesityl-oxide-oxalate (10%)*	> 60	..
Butyl mesityl-oxide-oxalate (5%)*	> 60	> 12

* Inasmuch as the bait protected by the 60 per cent citronellol was completely exhausted before the flies attacked the 20 per cent Butyl mesityl-oxide-oxalate, the concentration was reduced on the unknown baits first to 10 per cent, then to 5 per cent in order to obtain a comparison to the maximum concentration of citronellol, namely, 60 per cent.

Insecticide Meeting

(From Page 99)

Ohio, reporting for the Products Liability Insurance Committee.

The two-day meeting will close with a cocktail party and informal dinner and floor show on Tuesday evening at 6:00 P.M.

The general convention committee is headed by W. J. Zick of Stanco, Inc., New York. Arrangements and finances are in charge of John Powell of John Powell & Co., New York. The program committee is headed by C. L. Weirich of the C. B. Dolge Co., Westport, Conn. Those in charge of entertainment are L. J. LaCava of the Continental Can Co., chairman, J. B. Magnus of Magnus, Mabee & Reynard, Inc., and Charles Opitz of John Opitz, Inc. Louis Trevisan of the American Can Co. and W. J. Bjork of L. Sonneborn Sons, Inc., are in charge of World's Fair activities.

The program follows:

PROGRAM

MORNING SESSION

Monday, June 5

J. L. BRENN, Presiding

Registration: 9:00 A.M.
Meeting called to order. By President J. L. Brenn, Huntington Laboratories, Huntington, Ind.
Appointment of Committees.
Address of the President, J. L. Brenn.
Announcements.
Report of Secretary—Ira P. MacNair, Mac-Nair-Dorland Co.
Roll Call—Introduction of Guests.
"New Markets for Insecticides"—H. A. Thomas, Shell Oil Co. (Chairman, Insecticide Marketing Committee).

"Report on Test Methods against Crawling Insects"—Dr. F. L. Campbell, Ohio State University, Columbus, Ohio, in charge of N.A.I.D.M. Fellowship.
"How Association Legislative Activities are Handled"—C. L. Fardwell, McCormick & Co., (Chairman, Legislative Committee).

Report of Entertainment Committee: L. J. LaCava, Continental Can Company.
Group Luncheon.

AFTERNOON SESSION

Monday, June 5

W. J. ZICK, Presiding

Meeting called to order. 2:00 P.M.
Announcements.
"The Effects of Knockdown on the Resistance of Houseflies to Pyrethrum

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Sprays"—E. R. McGovran, W. N. Sullivan and G. L. Phillips, Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture,—presented by Dr. E. R. McGovran.
"The Toxicity to the Housefly of Optically Active and Inactive Compounds of the Rotenone Series, including some Dihydro-Derivatives" by W. N. Sullivan, L. D. Goodhue and H. L. Haller, Bureau of Entomology & Plant Quarantine, U. S. Department of Agriculture,—presented by W. N. Sullivan.
"Question and Answer Clinic on Labeling"—conducted by Dr. H. C. Fuller, Technical Consultant, Washington, D. C.
Adjournment.

MORNING SESSION

Tuesday, June 6

J. L. Brenn, Presiding

Meeting called to order. 10:00 A.M.
Announcements.
"Collaborative Tests on Disinfectants"—Dr. E. G. Klarman, Lehn & Fink Products Corp.
"A Discussion of Testing Self-polishing Waxes"—Melvin Fuld, Fuld Brothers.
"Facts About Carnauba Wax"—J. E. Godoy, W. R. Grace & Co.
"Floor Finishes and the Flooring Manufacturers"—E. C. Singler, Secretary, Maple Flooring Manufacturers Association.
"What Women Want in Insecticides and Disinfectants"—Dr. Walter H. Eddy, Good Housekeeping Institute. Group Luncheon.

AFTERNOON SESSION

Tuesday, June 6

Meeting called to order. 2:00 P.M.
Announcements.
"Unfair Invitations to Bid"—Gordon M. Baird, Baird & McGuire, Inc., Holbrook, Mass.
"Continuous Marketing Research"—J. O. Peckham, A. C. Neilson & Co. Products Liability Insurance Discussion: R. O. Cowin, Standard Oil Co. of Ohio, Chairman Products Liability Insurance Committee.
Report of Resolutions Committee.
Unfinished Business.
Adjournment.
Cocktail Party. 6:00 P.M.
Informal Dinner and Floor Show. 7:00 P.M.

Skin Cleaner

A composition for removing plasters and adhesive tape from the skin consists of a mixture of carbon tetrachloride with not more than 40 per cent of white oil. The mixture may contain up to 10 per cent of alcohol. Maurice Finegold. British Patent No. 495,766.

Toxicity of Insecticides

The toxicity of plant insecticides does not depend on their content of rotenone alone. *Derris elliptica* from Dutch Indian roots is toxic to both fish and warm blooded animals as represented by guinea pigs, and contains rotenone. *Derris uliginosa* from an Indo-China bark is toxic to fish only and does not contain rotenone. O. Gaudin and R. Vacherat. *Bull. sci. pharmacol.* 45, 385-94; through Chem. Abs.

ring to whiskers, said "some strange things happen to soap, I'll bet that they will have to go a long way to beat that one." "Yes, Walt," I said, "strange things do happen." "Sometime remind me to tell you about the time it snowed on a warm June day. That happened in this plant."

(Ed. Note: We are trying now to get this old-timer to write about this June snow storm.)

Mixing

(From Page 31)

rial be put through a revolving disc blender. This is a vertical mill with one rotating and one stationary head to which are attached special discs with intermeshing cone or spike tooth projections that impart to the material that vigorous rubbing action to completely blend the material into an analytically uniform mass. Figure No. 6 illustrates the disc blender.

Up to this point, only the moveable working parts of the various mechanical mixers have been described inasmuch as they do the actual mixing and upon their design depends the type of mixing secured. However, the case or tank or tub, or whatever one chooses to call the receptacle in which the agitating unit operates, deserves careful consideration. Today they may be secured of ordinary steel, stainless steel, galvanized iron, wood, and other materials.

Choosing the correct material to handle corrosive or highly abrasive substances is most important, and the manufacturer contemplating the purchase of mixing equipment is always wise in consulting the builder of his mixers on this problem.

In fact, simple mixing operations are not as simple as they may appear offhand. Not infrequently, improper mixing at some stage in a process, particularly lack of uniformity, is reflected in troubles with finished products, and often this is not recognized as the cause of the difficulty. Mixing is a widely used process, but it is seldom discussed. Perhaps more discussion in the light of individual mixing problems as a step toward the correct selection of proper mixing equipment, might not be amiss.

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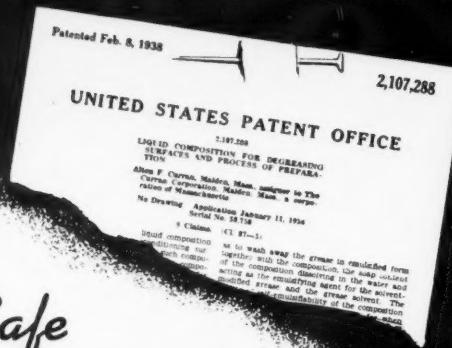
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News.....

W. E. Ruth in Pest Control

W. E. Ruth who was for some years associated with Rex Research, Inc., Toledo, manufacturers of Fly-Tox, has announced the opening of a pest control service business at Sandusky, Ohio, to serve that city and the surrounding community. Associated with him in the business is his brother, C. R. Ruth. Thus far, they have specialized in moth-proofing work. They are located at 406 East Adams St., Sandusky.

Hayden Joins Haag

Fletcher Hayden has recently been appointed sales manager of Haag Laboratories, soap and sanitary chemical manufacturers, Chicago. Mr. Hayden had been with Vestal Chemical Co., St. Louis, for five years, the last three as manager of the company's Chicago office.

Harry Cole's Son Lawyer

Allan W. Cole, son of the late Harry W. Cole who was formerly of Baird & McGuire, Inc., Holbrook, Mass., and for many years secretary of the National Association of Insecticide & Disinfectant Manufacturers, has announced the opening of a law office in Boston at 11 Beacon St. for the general practice of law.

Wants Polish Agency

A firm in Shanghai, China, is interested in the purchase of American manufactured polishes and waxes for automobiles. Further particulars may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1982.

U. S. C of C Elects McCormick

Charles P. McCormick, president, McCormick & Co., Baltimore, was recently elected to the board of directors of the U. S. Chamber of Commerce. He represents the third election district, comprising the states of Maryland, Virginia, West Vir-

ginia, North and South Carolina and the District of Columbia. He has been national councilor in the Chamber of Commerce for ten years.

Cottonseed Sweeping Compound

Posey's Chemical Co., Fort Worth, Tex., is manufacturing sweeping compounds from cottonseed hulls, using a new process patented and developed by the Mellon Institute.

Reeder Resigns from Zonite

S. Allen Reeder has resigned his post as advertising manager of Zonite Products Corp., New York. His work has been taken over by M. L. Pernice, Jr.

Form Moth Specialty Co.

Announcement has recently been made of the formation of the Sack Chemical Co., 114 West 30th Street, New York City. The company, of which Emanuel Sack is president, will make and distribute a line of moth crystals, sprays and powders.

Wax Film Booklet

Franklin Research Co., Philadelphia, has issued a new "40" Drop Booklet, showing exaggerated wax

films in evaporated form. These films are said to permit the layman to examine waxes for such characteristics as alkaline content, water resistance, toughness of film, etc. Copies are available.

Adds "Car-Nu" to Line

S. C. Johnson & Son, Racine, Wis., has added "Car-Nu," an automobile cleaner and polisher, to its line of household products. It is being promoted on the Fibber McGee program on the NBC Red network.

W. C. Brate Co. Moves

W. C. Brate Co., chemical specialties, has recently moved to newer and larger quarters at 510 Broadway, Watervliet, N. Y.

West Disinfecting Exhibit

West Disinfecting Co., Long Island City, New York, has an exhibit at the Medical and Public Health Building at the New York World's Fair. The aim of the exhibit is to demonstrate by means of photographs and models, the importance of industrial sanitation as a factor in preserving the health and efficiency of the worker. This is accomplished in the exhibit by showing the contrast between good and bad plant design, arrangement and sanitation, and the contrast between good and bad personal sanitary conveniences.



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Harrison's & Crosfield Paterson Fraser, Ltd., Toronto
J. E. Pike, Danbury, Conn.



The Mantrose Corporation

136—41st STREET

BROOKLYN, N. Y.

F. & S.
Quality Colors
for
TOILET SOAPS
LIQUID SOAPS
TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N. Y.
Import—Manufacture—Export

2 NEW ~ Outstanding
SCIENTIFICALLY TESTED—
WATERPROOF • SELF-POLISHING
FLOOR WAXES

Now available for the
JANITOR SUPPLY and
JOBBOING TRADE.

Made right—for profitable
business — can be had in
bulk or in containers —
under your own private brand

Let us prove our statements regarding
• these two "best seller" grades. Write
for free samples or for demonstration.

Empire Chemical Products Co.
12 LONGWORTH STREET NEWARK, N. J.

WE ALSO MANUFACTURE

Liquid Floor Soaps
Rug Shampoo

Metal Polish
Disinfectants

Gym-Finish
Paste Wax

Penick World's Fair Guide

S. B. Penick & Co., botanical drugs, New York, are offering to their business friends, a one hundred and eleven page guide book to New York City and the World's Fair. The book contains maps, pictures of places and persons, and illustrations of many of the buildings and exhibitions at the Fair.

New Barrett Phenol Plant

The Barrett Co., subsidiary of Allied Chemical & Dye Corp., has announced that it will construct a new unit at its Frankford, Pa., plant for production of synthetic phenol. The new plant will provide facilities to supply the domestic plastics industry.

Sweeping Compound Booklet

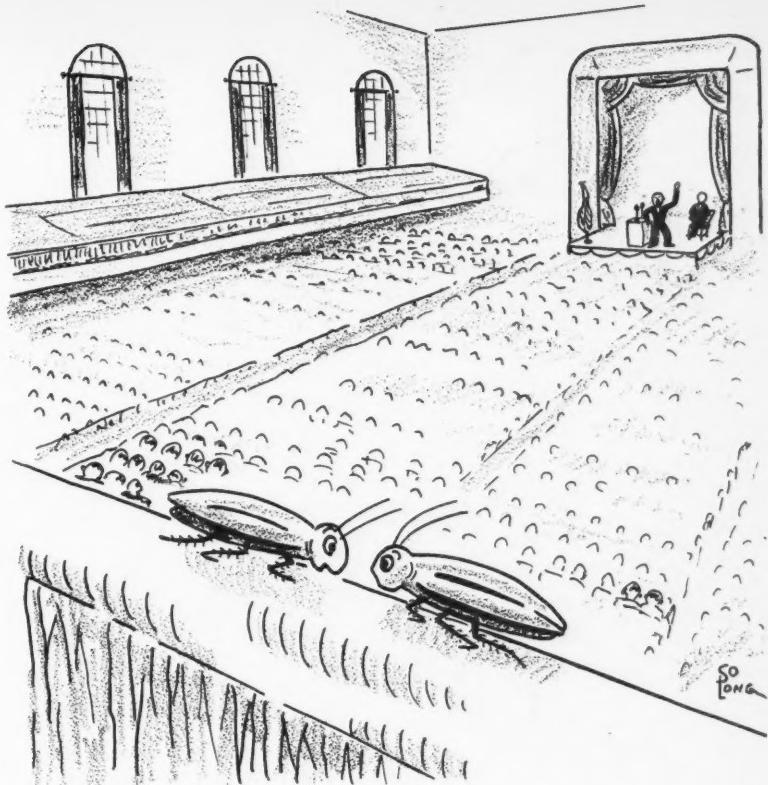
Jno. C. F. Snyder & Sons, Inc., Philadelphia, have just issued a booklet entitled "The Truth About Sweeping Compounds." It attempts to tell what the basic materials of a good sweeping compound should be, and what a good sweeping compound should do.

Bower Joins M. M. & R.

William W. Bower, formerly with J. E. Bernard & Co., has joined the New York sales staff of Magnus, Mabee & Reynard, Inc., essential oils, New York. He is a graduate of the Academy of Advanced Traffic and has had experience with transportation and shipping organizations.

Rosin Production Up

Rosin production in the United States during the naval stores season beginning April 1, 1938 and ending March 31, 1939, amounted to 2,612,391 barrels (500 lbs. gross), according to the 1938-39 Annual Naval Stores Report, issued by the U. S. Department of Agriculture. This was a gain over the 2,561,966 barrels reported for the season of 1937-38. Consumption in the United States for 1938-39 amounted to 1,168,436 barrels as against 1,191,734 barrels in 1937-38. Of this consumption, the



"Did you hear that, Clarence? He said pyrethrin II is soluble in dimethylketone. Wonder where he got his Ph.D.?"

soap industry accounted for 234,927 barrels in 1938-39 and 272,820 barrels in 1937-38. The insecticide and disinfectant industry used 3,963 barrels in 1938-39 and 4,060 in 1937-38. Exports of rosin dropped considerably during the past season with only 821,381 barrels being exported as compared with 1,034,472 in 1937-38.

of the St. Paul office is in charge of the new office, assisted by S. T. Murnane.

Mac-Lac Co. Moves

Mac-Lac Co., importer and manufacturer of shellac, New York, has recently moved to newer quarters at 127 Maiden Lane. The new location is being used for office and salesroom purposes.

New Shoe Polish Company

Bunny Products, Inc., Preston, Ontario, have recently been incorporated and will manufacture a line of shoe polishes. Henry Simard is president of the new company.

Anchor Hocking Moves

Anchor Hocking Glass Corp., Lancaster, Ohio, and its affiliate, Anchor Cap and Closure Corp., Long Island City, N. Y., have closed their St. Paul, Minn., office and opened a new office at 216 Security Building, Minneapolis. W. F. Strache, manager

New Parento Representative

Compagnie Parento, Inc., perfume oil compounds and essential oils, Croton-on-Hudson, New York, has announced the appointment of the firm of W. N. Stevenson, 112 North Front Street, Philadelphia, as their representatives in Pennsylvania and western New Jersey.

W-B Chemical Co. Moves

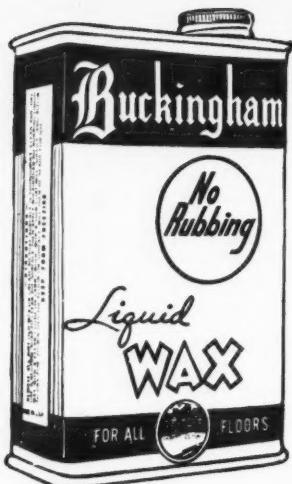
W-B Chemical Co., Mount Vernon, N. Y., has moved to newer quarters at 341 North High Street.

Welcome to the WORLD'S FAIR!

While visiting here we suggest that you come to see our modernly equipped floor wax manufacturing plant.

We manufacture a complete line of Floor Waxes, Polishes, Floor Seals, Gym Finishes, etc., under your own label. (We print your label.)

NO-RUBBING LIQUID WAX
PREPARED LIQUID WAX
(Polishing type)
PREPARED PASTE WAX
POWDERED DANCE WAX
FLOOR CLEANER AND BLEACH
FLOOR SEAL AND GYM FINISH
WHITE EMULSION FURNITURE POLISH



Our new water-proof no-rubbing wax continues to gain increasing acceptance among distributors and users. A host of satisfied buyers say it rings the bell with superior performance.

- **Waterproof**
- **Less Slippery**
- **Long Wear**
- **High Luster**

SEND FOR SAMPLES AND QUOTATIONS TODAY

Buckingham Wax Corp.

VAN DAM STREET AND BORDEN AVENUE

LONG ISLAND CITY

NEW YORK

NAPHTHENIC ACIDS

● CRUDE, SEMI-REFINED AND FULLY REFINED GRADES
AVAILABLE IN VARIOUS ACID NUMBER RANGES

GENERAL PETROLEUM CORPORATION

of California

108 WEST SECOND STREET

LOS ANGELES, CALIFORNIA

Say You Saw It in Soap!

THE average business house receives a great many inquiries for its products or services every year which cannot be attributed to any special source. A vast majority of these probably originate from some form of advertising but, due to the general tendency toward not mentioning the names of publications, cannot be directly traced.

When you write to anyone advertising in this publication, say you saw it in SOAP. The advertiser will appreciate it—and so will we!

The Publishers

Western Exterminator Booklet

Western Exterminator Co., Los Angeles, has issued a novel booklet in which various insects are treated as criminals. Each insect is described in full, and under a "wanted for" heading are the different crimes committed against society by each. More detailed information is presented on the habits of the insects. At the back of the booklet, eleven pages are devoted to a series of questions and answers.

Wants Insecticide Agency

A firm in Tel-Aviv, Palestine, would like to establish an agency for the sale of American insecticides. Particulars may be obtained by making application to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1729.

Citronella Export Measures

During the past few years the Netherland Indies Government has passed several measures to maintain the reputation of Java citronella oil, which has been menaced by certain commercial abuses. Recently, the following measures were put into effect: 1. Citronella oil, before being prepared for export, must be analyzed by the Laboratory for Chemical Research of the Division of Industry. 2. The certificate of analysis must show the total geraniol content and the citronella content, and must contain a statement as to whether the oil is or is not adulterated; this certificate may not antedate the export by more than two months and must be submitted to the customs together with the export assignment. 3. The analysis number of the certificate in point must be painted in clear white figures on the drum or package. Any exporter not observing these conditions may be officially deprived of the right to export essential oils. The Batavia standard contract for citronella oil has been modified so that the standard quality for citronella oil now is fixed at a total geraniol content of 85 per cent and a citronella content of 35 per cent. Other qual-

ities may be exported, but only on condition that the percentages of the geraniol content and the citronella content be indicated in the certificate.

running to the roof. They surrounded the poor old owl, and the president gave him a short lecture in owl talk. The bird gave them one look and dropped dead of fright. He was then turned over to Mr. Jones of the Purchasing Department to be stuffed. And this is the story of the famous McCormick owl.—believe it or not!



Here is the famous McCormick Wise Old Owl! Although Mr. Owl looks very much alive, he is in fact stuffed and graces the directors' room in the offices of McCormick & Co., Baltimore. The capture of this tough old bird was actually made on the roof of the McCormick Building by several executives of the firm who state that they had a difficult time convincing him that he should stay captured. After capture, they report, he pined away and then up and died. However, another version of the capture states that Mr. Owl was discovered on the roof by none other than the president of the company, C. P. McCormick, who immediately telephoned to the Purchasing Department to find out what to do. Then Les Jones, head P. A., called Amos Badertscher of the Entomological Department for advice. He called V. P. John Curlett.—and they all went a-

Sanitation Hand-Book

The Huntington Laboratories, Inc., Huntington, Ind., have just issued a new sanitation hand-book. It covers the company's various products under headings such as liquid soaps, floor cleaning, deodorants, disinfectants, insecticides, etc. Copies are available.

Lambert Co. Denies Charge

Lambert Pharmacal Co., St. Louis, has denied that its practice of giving advertising and promotion allowances violates the Robinson-Patman act as charged by the Federal Trade Commission. The company denied that there was any discrimination in price among its customers, since the allowances are available to any customers who will provide similar services on proportionally equal terms, and that these allowances are payments for services worth at least the amounts paid and are fixed in relation to the extent and character of the services.

Packaging Institute Elects

Officers of Packaging Institute, Inc., elected at the organization meeting held in New York City, are: William M. Bristol, Jr., Bristol-Myers Co., Hillside, N. J., president; Carl H. Lambelet, New Jersey Machine Corp., Hoboken, N. J., vice-president; and Helen L. Stratton, secretary-treasurer.

Kiefer Appoints Representative

The Karl Kiefer Machine Co., Cincinnati, has recently named Mailer Searles, Inc., as the company's representative in California, with offices at 300 Seventh St., San Francisco and at 420 South San Pedro St., Los Angeles.



HOCK WALD'S DISPENSERS

No. 1 Wall Type

No. 2 Basin Type

All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

WRITE FOR DESCRIPTIVE LITERATURE AND PRICES

Hockwald Chemical Company

135 Mississippi Street
San Francisco, Cal.

LARGEST PACIFIC COAST MFR. OF POTASH SOAPS AND SANITARY PRODUCTS

CARNAUBA WAX

Choice Selections

The maintenance of our own organization in Brazil places us in a unique position as importers of this product.

**ALL GRADES
SPOT OR FUTURES**

LENAPE TRADING CO., INC.
225 BROADWAY

NEW YORK

Sales Representatives

BOSTON, MASS.
N. S. Wilson & Sons Co.
729 North Station
Industrial Bldg.

CHICAGO
Arthur C. Trask Co.
4103 So. La Salle St.

SYRACUSE, N. Y.
L. R. Cross
418 Solar St.

ST. LOUIS, MO.
Clifford L. Ions Co.
619 Clark Ave.

PHILADELPHIA
R. Peltz Co.
36 Kenilworth St.

Build Up Customer Confidence

BY RECOMMENDING

DAN-DEE
NO-RUBBING
FLOOR WAX



**SPECIALLY PRICED FOR
THE JOBBING TRADE
PRIVATE LABELS SUPPLIED!**

- Made for HEAVY DUTY usage . . . quick drying, waterproof and excellent coverage qualities.
- Especially recommended for gymnasiums, institutions, schools, etc., where floor maintenance costs must be carefully watched.
- Full details, generous samples available upon request.
- The original Dan-Dee has the bridge on the label.

MANUFACTURED BY

TWIN CITY SHELLAC CO., Inc.
340 FLUSHING AVENUE

BROOKLYN, N. Y.

DISINFECTANTS
PINE OIL COAL TAR
CRESOL
COMPOUNDS

**LIQUID
POTASH OIL**
ALCOHOL (U.S.P.)

SOAPs
CLEAR BASE
POWDERED

**FLOOR
CLEANERS**
WAXES SCRUBS
SOAP — POWDERS

KANSAS CITY

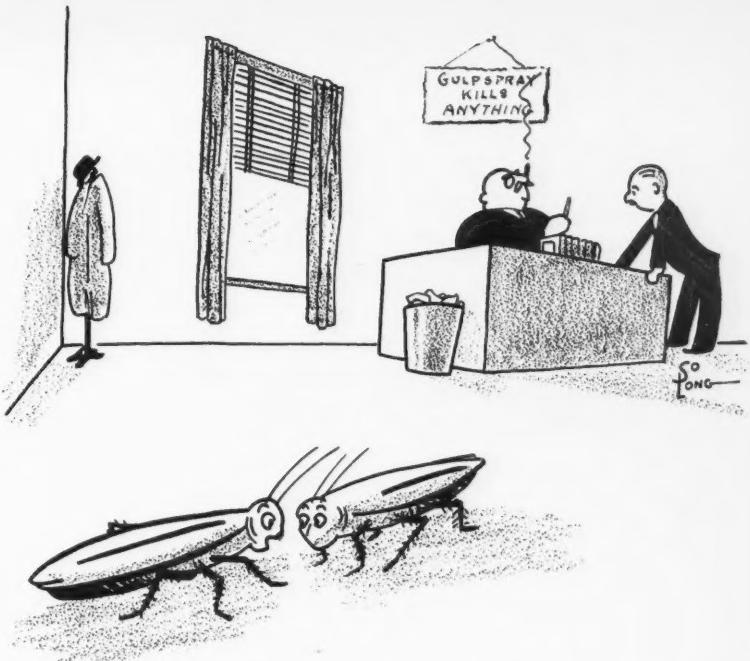
PECK'S PRODUCTS COMPANY
ST. LOUIS, MO.

NEW YORK

Say you saw it in SOAP!

Rideal-Walker Test Revised

R. G. Berchem, technical advisor to Jeyes' Sanitary Compounds Co., Ltd., London, calls our attention to an error in the text of the F.D.A. Method for Disinfectant Testing which was published in the 1939 edition of the BLUE BOOK. Reference is made in the F.D.A. Method to the Rideal-Walker test being carried out by the approved technique as published by S. Rideal and J. T. A. Walker in 1921. Mr. Berchem advises us that the technique of the test was thoroughly revised in 1934 and resulted in the publication of British Standards Specification No. 541. The revised technique is now in general use by members of the British Disinfectant Manufacturers' Association, as well as by all British Government Departments.



Pest Control Meeting Oct. 23-25

The Seventh Annual Convention of the National Pest Control Association which will take place at Hotel Pennsylvania, New York, October 23-24-25, is expected to be the biggest convention thus far held. Present plans call for "Clinics" which will deal specifically with the following subjects: termites, rats and mice, fumigation, chemicals and formulae, moths and carpet beetles, business routine and office management. Dr. Lee A. Strong, chief of the U. S. Bureau of Entomology and Plant Quarantine, will address the convention and from his staff there will be several in attendance and available for assistance. Dr. E. A. Back, Dr. Thomas E. Snyder and Dr. R. C. Roark are among those who will take an active part. The entertainment includes a dinner and night club show, a visit to Radio City and the Music Hall, and a dinner dance. October 27th has been set aside as a special day for the Pest Control Industry at the World's Fair and a full schedule is being arranged. Chairmen of the various committees are: P. Calvert Cissel, national convention committee; Wm. J. Shrimplin, local committees; S. S. Rosen, booth exhibits and advertising; C. H. W.

"Don't look now, Clarence,—but isn't that guy talking to the chief entomologist we met last summer at Lake Wawasee?"

Hasselriis, publicity; Col. Leopold Philipp, entertainment and World's Fair Visitors committee; Sidney Wimmer, attendance and registration; Merwyn Horwitz, reception and Mrs. Arthur O'Connor, chairlady of the ladies committee. H. G. Irving Sameth, president of the Association, is ex-officio member of all committees.

sponsible for the maintenance of industrial buildings and structures.

Hysan's New Price List

Hysan Products Co., Chicago, has just published an illustrated price list for jobbers. Prices are shown for their complete line of sanitary products which now numbers over 200 items.

Building Maintenance Book

Flexrock Co., Philadelphia, has recently published a handbook of building maintenance. It is said to be a ready reference for men re-

Handling Liquids

Processing, handling, and packaging of liquid products . . . tanks, kettles, mixers, pumps, filling equipment . . . a discussion of types and styles best suited for various products . . . based on a wide and intimate experience by the author, Ralph H. Auch, well-known chemical engineer . . . in an early issue.

Daughter for Pauley

Mr. and Mrs. Gerald F. Pauley are announcing the birth of a baby girl, Margaret Ward, on April 27th. Mr. Pauley is manager of Monsanto Chemical Company's Chicago office.

Nat'l Package Drugs Move

National Package Drugs Inc., St. Louis, have moved to new and larger quarters at 4200 N. Union Blvd. E. J. Fishgall is president of the company.

Hercules Moves N. Y. Office

Hercules Powder Co. recently moved its New York office to 500 Fifth Avenue.

THE MAC-LAC COMPANY

INCORPORATED

127 Maiden Lane New York, N. Y.

*Manufacturers for More
Than 50 Years*

SUPERIOR QUALITY

DEWAXED ORANGE SHELLAC

DEVELOPED ESPECIALLY FOR
USE IN NO RUBBING WAXES

- *Costs Less*
- *Dissolves Readily*
- *Low in Acid*
- *Gives Beautiful Film*

WE ALSO OFFER:

DEWAXED WHITE REFINED
SHELLAC

DEWAXED LIGHT ORANGE
REFINED SHELLAC

Samples Upon Request

TRY THESE WITHOUT OBLIGATION
AND CONVINCE YOURSELF

THE MAC-LAC COMPANY

INCORPORATED

FACTORY: RAHWAY, N. J.

We announce development of new type soap
colors

PYLAKLORS

They have good fastness to alkali, light,
tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send
for testing samples.*

PYLAM PRODUCTS CO., INC.

Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"

If you manufacture
products containing alcohol

Write us about

TONKAIRE

*A new synthetic specialty
which eliminates the
sharp odor of alcohol*



*We shall be pleased to
forward a sample
and full information*

COMPAGNIE PARENTO, Inc.

Croton-on-Hudson

New York

Sanitary Supply Ass'n Elects

Louis Herzog, Riddiford Bros., Inc., Chicago, was elected president of the National Sanitary Supply Association at the association's Seventeenth Annual Convention at the Morrison Hotel, Chicago, May 15, 16 and 17. Other officers are: Ellis Davidson, Ellis Davidson Co., New York, vice-president; S. J. Bockstanz Bockstanz Bros., Inc., Detroit, treasurer, and E. C. Kratsch, Milwaukee, secretary. Foremost among the developments at the convention was the decision to give the associate group greater recognition in the conduct of the association's affairs. As a step in this direction full voting power was granted the associate representatives on the board of directors. Speakers at the convention included James R. Sterling, Ross, Brown and Fleming, Chicago, whose topic was "The Sanitary Supply Salesman and the Merchandising of Sanitary Supplies, Viewed from the Buyer's Standpoint"; H. T. McAnly, Ernst & Ernst, Chicago, who spoke on "Planning Based Upon Knowledge of Operating Cost," and Dave Colcord whose address was on "Creative Selling."

Impregnated Pyrethrum Dusts

Impregnated dusts prepared with pyrethrum extract and containing 0.3-0.4 per cent of pyrethrins, were as effective as the ground, pure pyrethrum flowers containing 0.9 per cent of pyrethrins, in controlling the blunt-nosed leafhopper in cranberry bogs. Charles S. Beckwith, Am. Cranberry Growers' Assoc., Proc. 69th Ann. Convention, 9-11, 14-15; through Chem. Abs.

N.A.D.C. Convention

The National Association of Dyers and Cleaners has selected Baltimore as the site of its annual convention next Jan. 14-18. The exhibits will be housed in a new convention hall.

Rauch Stricken on Trip

Frederick Rauch of S. B. Penick & Co., New York, well-known in the insecticide industry, was stricken with an acute attack of an

internal disorder on a recent business trip and was confined to the hospital in Chicago for two weeks. He



Frederick Rauch

was then returned to New York by plane and confined to his home for some time. He has just recently returned to partial active duty with the Penick sales department.

Offer New Carpet Cleaner

Careful Carpet Cleaning Co., Long Island City, N. Y., is distributing a new patented compound recommended for the cleaning of twist weave, fugitive colors, "do not shrink" and location jobs.

W. H. Clarkson Dead

W. H. Clarkson, president of the Clarkson Chemical Co., Williamsport, Penna., manufacturers of insecticides, disinfectants, and sanitary supplies, died May 28 at Williamsport after a brief illness. Funeral services were held from his home on May 31. Mr. Clarkson has been well-known in the institutional supply business for the past twenty years, having founded the Clarkson Chemical Co. in 1919. J. H. Bender is treasurer and general manager of the company.

DuPont Solvent Prices Drop

A reduction of six to ten per cent in the prices of industrial and special grades of trichlorethylene and perchlorethylene for dry-cleaning and metal degreasing has been announced by E. I. du Pont de Nemours & Co., Wilmington, Del.

Courts Reject California Act

The California Clinic and Dispensary Act, passed in 1933 by the State Legislature and amended in 1935, has just been declared unconstitutional by the California State Supreme Court. In effect this decision makes it possible for any vendor to sell any proprietary product, labeled and in the original package, excepting poisons. The latter may still be dispensed only by licensees. In the immediate aftermath of the invalidation of this important control measure comes the report that the State Pharmacy Board is making strenuous efforts to have constitutional legislation passed at this session of the legislature to control the sale of drugs and chemicals as an emergency measure. *Soap* is indebted to M. G. Jorgenson of Chemoline Grain Fumigant Co., Los Angeles, for last minute details on this important development just as we close for press.

Cans, Inc., Moves

Cans, Inc., has moved its factory and sales office to new and larger quarters at 3217 W. 47th Place, Chicago. The Cans company is headed by R. S. Solinsky, well-known figure in the insecticide and sanitary supply industry who was, for several years, chairman of the entertainment committee of the N.A.I. & D.M.

To Visit Penick Plant

Following the close of the mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers at the Hotel Biltmore, New York, June 5 and 6, a group of insecticide manufacturers will visit the Lyndhurst, N. J., plant of S. B. Penick & Co. to view the manufacture of "Pyrefume" pyrethrum extract. The trip of inspection will be followed by a luncheon at the Biltmore, Wednesday noon, June 7.

Use Canadian Fish Oil

Soap manufacturers in Australia are using increasing quantities of Canadian fish oil, according to a report issued by H. L. Priestman, assistant trade commissioner for Canada at Sydney, New South Wales.

The HOLZ-EM SOLVES the PROBLEM



of convenient and proper application of floor waxes, seals and varnishes. You can be sure that your products are being used correctly by selling or recommending the HOLZ-EM WAX APPLICATOR and SPREADER to do the job. Designed by experts, made of the best materials, the HOLZ-EM will help build your list of satisfied customers just as it has done for others who are already familiar with the product.

We manufacture a complete line of wool applicators, cotton dust mops and cotton wet mops. For prices and samples write

AMERICAN STANDARD MFG. CO.
2509-13 South Green Street
Chicago, Ill.

**SPECIALTY
SOAP PRODUCTS**

Liquid Soap Base
Potash Oil Soap
Liquid Soap
U. S. P. Green Soap
U. S. P. Cresol Compound
Coal Tar Disinfectants
Pine Oil Disinfectants
Insecticides
Liquid Floor Wax

We manufacture for the trade only
HARLEY SOAP CO.,
2832 E. Pacific St.,
Philadelphia, Pa.

Ask for samples
of above specialty
bulk products.

A new floor wax

for the janitor supply
and jobbing trades which is

waterproof
and which gives a
high gloss

ZIP-ON WAX

Dries very bright and becomes water resistant
as soon as dry. Wax content guaranteed
100% Carnauba. Supplied in bulk, or with
your label in any size container.

Shawmut Specialty Co.

91 Bickford St. Boston

FOR EFFICIENT, ECONOMICAL MIXING

**OF SWEEPING COMPOUNDS, DEODORANT
CRYSTALS, INSECTICIDES** Lower power consumption, rapid, through mixing, and long trouble-free service feature this Sprout-Waldron mixer. Brush sifter, to remove lumps and foreign material, is optional equipment. Capacities $2\frac{1}{2}$ to 15 cu. ft. Write for catalog.

SPROUT, WALDRON & CO., INC.

132 SHERMAN ST.
MUNCY, PA.
MIXING, CONVEYING, POWER TRANSMISSION MACHINERY

202 Common Household Pests

By Dr. Hugo Hartnack, Exterminating Service, Inc., and published by Hartnack Publishing Co., Chicago. Contains 352 pages ($5\frac{1}{2}$ x 8 inches). Price, \$3.75. An American book on household pests; covering history, appearance, development, life habits, economic danger, damage to health and control of 202 household pests. The book has over 300 illustrations which more easily enables the author to portray his subject matter. A portion of the contents is devoted to a discussion on extermination; where it does not pay, suggestions, what determines good service, exterminators, and earmarks of a good exterminator. Fumigation is also discussed with its relation to governmental legislation. All in all, the book fills the need for a source of further enlightenment on household pests; valuable to exterminators, insecticide manufacturers, real estate dealers, builders, architects, property owners, students, etc.

N. Y. Exterminators Meet

The Associated Exterminators & Fumigators of N. Y. held a meeting May 18, at the Cafe Loyale, New York. Dr. Alfred Weed, John Powell & Co., New York, spoke on the subject of "Pyrethrum" and commented particularly on the high prices which prevail at the present time. An important factor in this situation, said Dr. Weed, is the use by the Japanese army of more than one thousand tons of pyrethrum annually. He reported also that there was an unsatisfactory crop of flowers last year. The Japanese are taking their usual advantage of the situation by exaggerating the shortage of supply. Dr. Weed predicted that high prices would continue to prevail during the remainder of 1939 and 1940, but stated that it was his opinion that by 1941 there would be an overproduction of pyrethrum due to the fact that satisfactory synthetic substitutes were now on the market and also because pyrethrum flowers of good quality were being grown in Peru and other South American countries. Copies of a proposed advertising code which had

been prepared by the advertising code committee of the Association were distributed. The purpose of the code is to eliminate unfair advertising that has been common in the industry. President Buettner explained that if the code was adopted by a majority of the industry in New York City, it would be enforced by the New York Better Business Bureau.

Vincent Mider Dead

Vincent Mider, president of the U. S. Chemical Co., Greenville, Ohio, and active for many years in the sanitary supply business in the mid-west, died suddenly on May 8 at his home in Greenville. He had been in poor health for some time, but had apparently been on the mend in recent months. He is survived by his widow who will continue to carry on the business. Mr. Mider was prominent in the affairs of the National Sanitary Supply Assn.

Oil Specialties Move

Oil Specialties & Refining Co., Brooklyn, has discontinued its Newark, N. J. office and has relocated at 74 Emerson Place, Brooklyn.

Hexachlorethane Insecticide

Insecticidal properties are being claimed for Hexachlorethane, according to an article which appeared in the January issue of *La Parfumerie Moderne*. It is said to be a crystalline powder which can be easily pelleted and perfumed. Its chlorine content is 90 per cent, and at room temperatures, it volatizes slowly to give a heavy penetrating vapor which is noxious to insects and harmless to human beings and warm-blooded animals. It is claimed that hexachlorethane kills insects, and that eggs and larvae do not hatch out. It is non-corrosive, has an odor similar to camphor and is easy to handle.

New McCormick Disinfectant

McCormick & Co., Baltimore, are now marketing a new "Bee Brand Disinfectant." It is claimed that the new disinfectant is non-poisonous and will not burn the skin. The product is especially recommended for use where disinfectants with strong carbolic, phenol or chlorine odors are considered unsuitable or objectionable.



ATTENTION

SOAP & SANITARY PRODUCTS MANUFACTURERS

We are selling the following equipment from the Larkin Company plant in Buffalo, New York. The machinery listed below is of recent design and in excellent condition. Don't miss this opportunity to fill your requirements at unusually low prices.

OUTSTANDING BARGAINS FROM LARKIN PLANT

Proctor & Schwartz 2 Fan Soap Chip Dryer with 36" Roll. Complete. Very Fine Condition.

Johnson Automatic Soap Chip Filling, Weighing and Sealing Machines for 2 lb. and 5 lb. Packages.

1 Pneumatic Scale Corp., Rotary Round Can Filler with conveyors for Filling Powders.

10 Dopp Crutchers.

4 Perfection Crutchers.

5' x 7' Crystalizing Roll Complete with Mixer for Manufacturing Fluffy Soap Powder.

5 Roll Water Cooled H-A Mill for Making Polished Flakes.

2 No. 14 Blanchard Soap Powder Mills.

Also Dry Powder Mixers and Other Miscellaneous Equipment

We invite your inspection and inquiries. All machinery and equipment is priced for immediate sale.

USED SPECIALS FROM OUR REGULAR CHICAGO STOCK

H-A, 1500, 3000, 4000, 5000 lbs. capacity, Steam Jacketed Crutchers.

Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.

Ralston Automatic Soap Presses.

Scouring Soap Presses.

Empire State, Dopp & Crosby Foot Presses.

2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.

H-A 4 and 5 roll Steel Mills.

H-A Automatic and Hand-Power slabbers.

Proctor & Schwartz Bar Soap Dryers.

Blanchard No. 10-A and No. 14 Soap Powder Mills.

J. H. Day Jaw Soap Crusher.

H-A 6, 8 and 10 inch Single Screw Plodders.

Allbright-Nell 10 inch Plodders.

Filling and Weighing Machines for Flakes, Powders, etc.

Steel Soap frames, all sizes.

Steam Jacketed Soap Remelters.

Automatic Soap Wrapping Machines.

Glycerine Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.

Day Grinding and Sifting Machinery.

Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Proctor & Schwartz large roll Soap Chip Dryers complete.

Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.

Day Talcum Powder Mixers.

All types and sizes—Tanks and Kettles.

Ralston and H.A. Automatic Cutting Tables.

Soap Dies for Foot and Automatic Presses.

Broughton Soap Powder Mixers.

Williams Crutcher and Pulverizer.

National Filling and Weighing Machines.

NEWMAN TALLOW & SOAP MACHINERY CO.

1051 W. 35th ST., CHICAGO, ILLINOIS

Telephone: Yards 3665-3666

OUR FORTY YEARS SOAP EXPERIENCE CAN HELP SOLVE YOUR PROBLEMS

Classified Advertising

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Salesman: Man with wide knowledge of soap, cosmetic, and allied manufacturers, desires to make new connection with supplier of raw materials to these industries. Commercial and drawing account. Best references. Proved sales record. Address Box No. 621, care of *Soap*.

Superintendent and Soap Chemist: Specialist in all type potash and liquid soaps. 14 years experience. Can guarantee his results. Desires connection on Pacific seaboard. Address Box No. 623, care of *Soap*.

Experienced Soap Maker wishes to make permanent connection. Able to manufacture Neutral Liquid Soap (without doctoring), also insecticide non-rubbing wax, prepared liquid and paste waxes, metal polishes, etc. Address Box No. 625, care *Soap*.

Salesman: Soap chemist well versed in the manufacture and sale of industrial soaps and institutional cleaners is interested in connection in Southern California. Present employment in middle-west requiring 4 month notice. Address Box No. 624, care of *Soap*.

Soap Maker is looking for steady position also able to make chemical laboratory analyses. Address Box No. 632, care *Soap*.

Salesman: Followed the Sanitary Field for the past 10 years covering most of the states east of the Mississippi River, catering to the following trades:—janitor supplies; bar; restaurant; paper and chemical jobbers;—have following. Would consider salary or drawing account. Working at present but desirous of permanent connection with a reputable house. Address Box No. 626, care of *Soap*.

Positions Open

Wanted: Alert salesman to sell nationally advertised quality merchandise to Institutional Markets. A producer can write his own check. Answer in full—personal interview granted if you qualify. Address Box No. 631, care of *Soap*.

Salesman Wanted: To sell paste, liquid and no-rubbing floor waxes to institutions and industrial trade. Must have following. Commissions. Write giving full details. Address Box No. 622, care of *Soap*.

A Purified Processor Makes a Pure Product



● The exacting cleansing and activating of Filtrol Products results in materials so pure that they can be used in any edible or inedible product with absolute safety...they assure a purer product.

FILTROL
35F
FILTERING MATERIAL FOR
DECOLORIZING AND PURIFYING
FILTROL CORPORATION
GENERAL OFFICES: 315 W. FIFTH ST., LOS ANGELES, CALIFORNIA
PLANTS: VERNON, CALIFORNIA JACKSON, MISSISSIPPI

YOU'RE INVITED

To visit our convenient neighboring offices on your way to the New York World's Fair.

Warehouse and Shops

335 Doremus Ave., Newark, N. J.

Liquidation—
Tex. Dye Wks.

River Road,
Fairlawn, N. J.

Crutchers

Soap Kettles

Powder Mixers

Granite Mills

Plodders

Slabbers

Foot and Automatic

Soap Presses

Cutting Tables

Pulverizers

Soap Pumps

Soap Chippers

Filter Presses

Soap Frames

Powder Fillers

Labellers

Tanks

Boilers

Selected Specials

2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single roll mill.

3—Houchin Plodders, 10", 8".

4—Steel Wool Mfg. Machines, complete.

3—Automatic Soap Wrapping Machines, electric glue sealers, adjustable.

1—Jones automatic Soap Press.

2—Pneumatic Scale Carton Packaging Units.

Send for latest "Consolidated News"

CONSOLIDATED PRODUCTS CO., INC.

15-21 PARK ROW

Barclay 7-0600

NEW YORK, N. Y.

Cable Address: Equipment

We buy your idle Machinery—Send us a list.

Wanted: Experienced sanitary supply salesman calling on Janitor and Chemical Supply Jobbers, and Cosmetic Manufacturers—to carry additional line of high grade soaps and sanitary chemicals. Unlimited territories. Liberal commissions. Write Central States Chemical Company, International Bldg., St. Louis, Missouri.

Salesman: for strong line Soapless Oil Shampoo Base. Liberal commission. Western Reserve Laboratories, 6619 Denison Ave., Cleveland, Ohio.

Miscellaneous

Soap Agency Wanted: Firm in Trinidad desires to represent American manufacturer in that market for laundry and toilet soaps. Desires prices and other details C.I.F., Port-of-Spain, Trinidad, B.W.I. Max Markreich, Port of Spain, 139 Tragarete Road, Trinidad, B.W.I.

Complete Soap Plant Equipment for Sale: Proctor soap chip dryer; automatic soap press; wrapping machine; 4 roll stone mills; foot press; plodders 6", 8", 10"; soap boiling kettles; 6 knife chipper; two-way cutting table; frames; filter presses; crutchers; mixers; boilers. Stein Equipment Corp., 426 Broome St., New York City.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Guaranteed Rebuilt Equipment for the Manufacturer of Insecticides and Disinfectants. New York's largest display and stock of Mixers, Dry Mixers, Tanks, Dryers, Grinders, Pulverizers, Hammermills, Labelers, Stills, Day Packers, Filter Presses, Powder Fillers, Carton Fillers and Miscellaneous machinery. First Machinery Corporation, 9th Street and East River Drive, New York, N. Y.

Wanted: Agency for Scandinavia in well known first class American made insecticides and disinfectants and other new specialties. M. Bro Chem Factory, Danasvej, Copenhagen V Denmark.

Wanted: Soap powder chilling roll, capacity 1000 to 2000 pounds per hour. State price, age, and location. Address Box No. 630, care of *Soap*.

Brill Offers: Proctor 2-roll Soap Chip Dryer; 4-roll Stone Mills; No. 14 Blanchard Mill; 8" Plodder; Cutting Tables; Filter Presses; Crushers; Slabbers; Soap Presses; etc. Send for catalog. Brill Equipment Corporation, 183 Varick Street, New York, New York.

#108 WINDSOR'S BRAND NEW ~NO - RUBBING WAX~

#108 Is Heavy Bodied

Insures for greater floor protection than soft-bodied waxes—especially in heavy traffic areas.

#108 Spreads Evenly

Won't gum or lump on applicator or mop; won't show streaks. Requires less effort to apply.

#108 Is Water Proof

Water-resistant to damp mopping after drying to high lustre. Another "108" superiority!

#108 Won't "Milk"

Doesn't turn white on floors adjacent to water basins, etc. Requires less cleaning.

#108 Takes Buffing

Can be buffed after drying to a high lustre. Shows no powderizing marks after buffing.

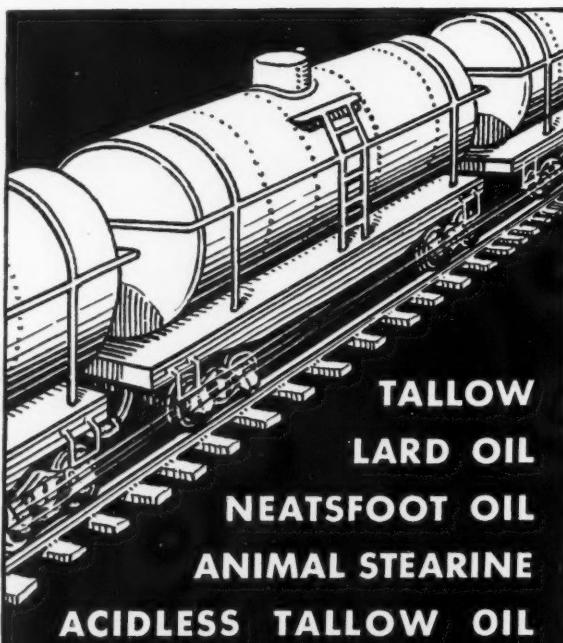
#108 Is Not Odorous

Has no ammonia, or other disagreeable odors.

WINDSOR IS PROUD OF No. 108. It is the product of our own laboratory development. No. 108, like other Windsor products contains only the finest ingredients.

5 gal. TRIAL ORDER at 55 gal. Drum Price
(with return and credit privilege)

WINDSOR WAX CO.
53 Park Place • New York



Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, on page 144 for page numbers. "Say you saw it in SOAP."

ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Floor Products)
Chemical Supply Co. (Disinfectants, etc.)
Clifton Chemical Co. (Sanitary Supplies)
Curran Corp. (Detergents)
Davies-Young Soap Co. (Potash Soaps)
Empire Chem. Prods. Co. (Sanitary Supplies)
Federal Varnish Co. (Floor Products)
Fuld Bros. (Sanitary Supplies)
Harley Soap Co. (Soap Specialties)
Hockwald Chemical Co. (Sanitary Supplies)
Hysan Products Co. (Sanitary Supplies)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
Peck's Products Co. (Sanitary Supplies)
Philadelphia Quartz Co. (Detergents)
Geo. A. Schmidt & Co. (Soaps)
Shawmut Specialty Co. (Wax Products)
Sweeping Compound Mnfrs. of N. Y. (Floor Products)
Twi-Laq Chemical Co. (Wax Products)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Supplies)
T. F. Washburn Co. (Floor Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
General Dyestuffs Corp.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.

Philadelphia Quartz Co.
Rohm & Haas Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperlie
Pylam Products Co.

CONTAINERS and CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures & Bottles)
Continental Can Co. (Tin Cans)
National Can Co. (Cans)
Owens-Illinois Glass Co. (Bottles & Closures)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
Hysan Products Co.
National Sanitary Chemical Co.

INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Rohm & Haas Co.
Whitmire Research Corp.

MACHINERY

Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses
and Cartoning Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants,
Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc)
Stokes & Smith Co. (Pkg. Machy.)

Raw Material and Equipment Guide

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MACHINERY, USED

Consolidated Products Co.
Newman Taliow & Soap Machinery Co.

MISCELLANEOUS

American Colloid Co. (Bentonite)
American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
Garnet Chem. Corp. (Drip Machines)
General Petroleum Corp. (Naphthenic Acids)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Lenape Trading Co. (Waxes)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
S. Schwabacher & Co. (Naphthenic Soaps, White Mineral Oils)
Steryl Products Corp. (Toilet Deodorizer)

OILS, FATS, AND FATTY ACIDS

Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Weccoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

Amer-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.

Monsanto Chemical Co.

Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Deodorized Insecticide Base, White Oils, Petrolatum,
Paraffine, Oils, etc.
Atlantic Refining Co.
Pennsylvania Refining Co.
S. Schwabacher & Co.
L. Sonneborn Sons.

PHOSPHATES

Trisodium, Sodium Pyrophosphate, etc.
American Cyanamid & Chemical Corp.
John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract.
Derris Products
Associated Chemists, Inc.
Derris, Inc.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.

SILICATES

E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SOAP DISPENSERS

Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.

SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Dula Mfg. Co. (Steam Vaporizers)
Fumeral Co. (Spraying Systems)
Universal Metal Prods. Co.

WAXES AND GUMS

Carnauba, Shellac, Candelilla, etc.
American Cyanamid & Chem. Corp.
General Dyestuff Corp. (Waxes)
Innis, Speiden & Co. (Waxes)
MacLac Co. (Shellac)
Manrose Corp. (Shellac)
Twin City Shellac Co. (Shellac)

Professional Directory

Pease Laboratories, Inc.

Est. 1904

39 West 38th Street New York

Chemical, Bacteriological and Pathological Testing and Research. Special Animal Investigations of Pharmacologic, Toxic or Skin Irritating Properties.

H. A. SEIL, Ph.D

E. B. PUTT, Ph.C., B.Sc.

SEIL, PUTT & RUSBY, INC.

Analytical and Consulting Chemists

Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations

ESSENTIAL OILS

SOAP

16 East 34th Street. New York, N. Y.

STILLWELL AND GLADDING, Inc.

Analytical and Consulting Chemists

Members Association of
Consulting Chemists and Chemical Engineers

130 Cedar Street New York City

SOAPS — DETERGENTS

Analyses Development
Consultation Formulas

Hochstadter Laboratories

INCORPORATED
254 West 31st St. New York City

KILLING strength of Insecticides by PEET GRADY METHOD

(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)

We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
5235 WEST 65th STREET CHICAGO, ILL.

CHARLES S. GLICKMAN

Consulting Chemist

SPECIALIZING IN
Wax Polishes—Chemical Specialties
White Shoe Polishes—Floor Seals
Plant Design—Formulas—New Products

220 Broadway New York
Cortlandt 7-3382

FOSTER D. SNELL, INC.

Chemists—Engineers

Every form of Chemical Service

305 WASHINGTON STREET BROOKLYN, N. Y.

Patents—Trade Marks

All cases submitted given personal attention.
Form "Evidence of Conception" with instructions for use
and "Schedule of Government and Attorneys' Fees"—Free

Lancaster, Allwine & Rommel

PATENT LAW OFFICES
Suite 402, Bowen Building Washington, D. C.

ALAN PORTER LEE, Inc.

Contracting and Consulting Engineers

Design and Construction of Equipment and Plants
for Producing and Processing Fats, Oils,
Soaps and Related Products

136 LIBERTY STREET, NEW YORK, N. Y.
Cable Address: "ALPORTLE", New York

PATENTS AND TRADE MARKS

Patent and Protect Your Inventions.

Expert service. Prompt attention.

LESTER L. SARGENT

REGISTERED PATENT ATTORNEY

1115 K St., N. W., Washington, D. C.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.

Research—Analyses—Tests

Refer To Your 1939

SOAP BLUE BOOK

for F.D.A. Method for Testing of Disinfectants.
Peet-Grady Method for Testing Insecticides.

MAC NAIR-DORLAND CO.

Publishers

254 W. 31st Street New York, N. Y.

Index to Advertisers

For product classification see pages 141 and 142

* For further details see announcement in 1939 SOAP BLUE BOOK

*American-British Chemical Supplies.....	124	*Koppers Co.....	76
American Can Co.....	44	Kranich Soap Co.....	54
American Cyanamid & Chemical Corp.....	May	Lancaster, Allwine & Rommel.....	143
American Standard Mfg. Co.....	136	*A. P. Lee.....	143
Anchor-Hocking Glass Corp.....	4, 9	*Leghorn Trading Co.....	Apr.
Aromatic Products, Inc.....	87	Lenape Trading Co.....	132
Associated Chemists, Inc.....	118	Lord Baltimore Hotel.....	144
Atlantic Refining Co.....	116		
*Baird & McGuire, Inc.....	96	MacLac Co.....	134
Barrett Co.....	May	Magnus, Mabee & Reynard, Inc.....	46
Bobrick Mfg. Co.....	120	Mantrose Corp.....	128
Books.....	52	Manufacturing Chemist.....	May
*Breuer Electric Mfg. Co.....	93	*McCormick & Co.....	91
Buckingham Wax Corp.....	130	McLaughlin Gormley King Co.....	Back Cover
*Candy & Co.....	110	Mirvale Chemical Co.....	May
Chemical Supply Co.....	124	*Mixing Equipment Co.....	May
John A. Chew, Inc.....	May	Monsanto Chemical Corp.....	2nd Cover, 71
*Clifton Chemical Co.....	89	Murray Oil Prods. Co.....	May
*Columbia Alkali Co.....	14	*National Can Co.....	80
Compagnie Parento.....	134	National Sanitary Chemical Co.....	May
*Consolidated Products Co.....	139	*Newman Tallow & Soap Machinery Co.....	138
*Continental Can Co.....	112	*Niagara Alkali Co.....	40
Curran Corp.....	126	Norda Essential Oil & Chemical Co.....	74
*Davies-Young Soap Co.....	12, 13	*Orbis Products Co.....	10
*Derris, Inc.....	94	Owens-Illinois Glass Co.....	17
Diamond Alkali Co.....	64	*Pease Laboratories.....	143
*Dodge & Olcott Co.....	108	Peck's Products Co.....	132
*Dow Chemical Co.....	Apr.	S. B. Penick & Co.....	79
*P. R. Dreyer, Inc.....	126	*Pennsylvania Refining Co.....	92
Dula Mfg. Co.....	122	Philadelphia Quartz Co.....	50
*E. I. DuPont de Nemours Co.....	38, 78	*John Powell & Co.....	72, 73
Eastern Industries.....	May	R. J. Prentiss & Co.....	75
*Electro Bleaching Gas Co.....	40	*Proctor & Schwartz, Inc.....	68
Empire Chemical Prods. Co.....	128	*Pylam Products Co.....	134
*Federal Varnish Co.....	90	*Reilly Tar & Chemical Co.....	120
*Felton Chemical Co.....	6, 85	*Rohm & Haas Co.....	82
Fezandie & Sperrele.....	128	*C. G. Sargent's Sons Corp.....	143
Filtrol Corp.....	139	George A. Schmidt & Co.....	May
*Firmenich & Co.....	May	S. Schwabacher & Co.....	May
Anthony J. Fries.....	May	Seil, Putt & Rusby.....	143
Fritzsche Brothers, Inc.....	42, 43	Shawmut Specialty Co.....	136
*Fuld Brothers.....	3	*Skinner & Sherman.....	143
*Funeral Co.....	106	*Foster D. Snell.....	143
Garnet Chemical Corp.....	May	*Solvay Sales Corp.....	83
*General Chemical Co.....	70	*L. Sonnenborn Sons.....	95
*General Drug Co.....	8	Sprout, Waldron & Co.....	136
General Dyestuff Corp.....	66	Standard Silicate Co.....	64
General Petroleum Corp.....	130	Steryl Products Corp.....	May
*Givaudan-Delawanna, Inc.....	Front Cover, 77	Stillwell & Gladding.....	143
Charles S. Glickman.....	143	*Stokes & Smith Co.....	7
Harley Soap Co.....	136	*Tar & Chem. Division Koppers Co.....	76
Hercules Powder Co.....	88	Twi Laq Chemical Co.....	Apr.
*Hochstadter Laboratories.....	143	Jos. Turner & Co.....	34
Hockwald Chemical Co.....	132	Twin City Shellac Co.....	132
*Hooker Electrochemical Co.....	Apr.	*Uncle Sam Chemical Co.....	11
Houchin Machinery Co.....	62	*Ungerer & Co.....	3rd Cover
*Huber Machine Co.....	144	Universal Metal Products Co.....	May
*Hysan Products Co.....	114	*Van Ameringen-Haebler, Inc.....	16, 81
Illinois Chemical Labs.....	143	*Victor Chemical Works.....	15
Independent Mfg. Co.....	140	*Warner Chemical Co.....	48
*Industrial Chemical Sales Division W. Va. Pulp & Paper Co.....	56	*T. F. Washburn Co.....	122
*Innis-Speiden & Co.....	52	Wecline Products Co.....	144
R. A. Jones & Co.....	18	*Welch, Holme & Clark Co.....	54
Karl Keifer Machine Co.....	68	*White Tar Co. of N. J.....	76
		*Whitmire Research Corp.....	104
		Wilson & Bennett Mfg. Co.....	118
		Windsor Wax Co.....	140

Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.



High Grade Distilled

FATTY ACIDS

COCONUT
PALM
CORN
LINSEED

SOYA BEAN
COTTON SEED
WHITE OLEIN
TEASEED

—and Refined Oils of ABOVE

—also SPECIAL PROCESSED FATTY ACIDS and oils, as required for specific soap, resin, and cosmetic uses. Highest purity and color.

Specifications and Samples submitted on request, stating your approximate type needs.

"ASK WECOLINE" — especially if you place emphasis upon the quality of materials used in your products, and demand rigid specifications.

WECOLINE Products, Inc. BOONTON, N.J.
Sales Offices: NEW YORK.....CHICAGO.....BOSTON

Modern Soap Perfumes

by FRANK H. SEDGWICK

Practical handbook on the science of soap perfumery. The author lays down the general principles which apply, and also offers a number of novel and useful suggestions on compounding. His experience in soap perfumery has been extensive in the British soap trade.

Priced, post free, at \$1.50 per copy. Send check with order.

American Agents

MAC NAIR-DORLAND CO.

254 WEST 31ST STREET

NEW YORK CITY

for low cost in
para block
manufacture



These two practical machines are all you need to produce high quality para blocks or cakes. The small machine will thoroughly mix all ingredients.

The large machine will compress the mixture into any shape dies can give.

In addition, the mixer can be used on other dry products such as roach powder, cleaners, bath salts, etc. It will also give a smooth, soft and velvety texture to creams. The hand lever press has more power than cheap foot presses. Send us some of your material and let us show you some specimen cakes.

HUBER MACHINE CO.

265 46th Street, Brooklyn, N. Y.

Makers of Good Soap Machinery for Forty Years

*Host to most
WHO VISIT BALTIMORE*

LABEL OF THE TRAVEL-WISE

**The
LORD BALTIMORE
Hotel**

BALTIMORE, MARYLAND

Tale Ends



Cold as ice . . .

IS this your salesman going in "cold as ice" on a new prospect? Or has the prospect read something about your products in your trade paper advertising before the salesman gets there?

You can pave the way for your salesman, increase his chances of getting the order, and save his time by giving the buyer advance information about your products through trade paper advertising.

And if it's in the field of soap products, insecticides, disinfectants, and allied sanitation products and chemical specialties, you can best pave the way for your salesman by advertising in

WHEN a bad law is proposed in *your state* which may directly hurt your business, why not help out in the general fight by writing or wiring to your state representatives and tell them that you oppose such bills? As usual, a few manufacturers carry on the active fight. The majority sit by and watch. It may be all well and good to "let George do it," but if George ever gets tired of his job, your business will suffer! Why not give a hand to the trade associations in this work by chiming in with a telegram or letter now and then?

A humorous letter tells us that by attending a "college" for exterminators, anybody and everybody can become experts in bugology in three days. The "students" learn how to control moths by use of red pepper and salt peter, the latter evidently to retard breeding. The use of pepper to make the bugs sneeze themselves to death is apparently the latest technique in insect control.

By the way, did you receive a copy of the 1939 *Blue Book*? Copies have been sent to all regular paid subscribers. If you didn't get a copy, maybe your subscription has lapsed. A very limited stock of *Blue Books* remains. They will not last long. Rush in that check for three dollars for a subscription to *Soap & Sanitary Chemicals* and we will see that you get one of those remaining *Blue Books*!

Read all about "Soap in the Public Prints" in the next issue. These fancy magazines and these "consumers' services" are printing lots about soap these days. We plan to take 'em for a ride next month. If you want to go along, buy your tickets now!

SOAP and Sanitary Chemicals

254 WEST 31st STREET

NEW YORK

Member of the A.B.C. and A.B.P.

ODORS
For your
PRODUCTS
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THE astounding New York World's Fair, so effectively dramatizing the World of Tomorrow, will awaken new vistas, new opportunities, and new desires in all markets. New products, new packages, new toilet goods, new perfumes, and new soaps will be required.

Perforce, there will be a call for new odors. We are ready for these demands. No matter what your odor problems and demands will be in connection with these products of tomorrow, call on us,

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ARE YOU PAYING TOO MANY
**Dollars for
Scents?**

WE were talking to an insecticide manufacturer recently who was happy as a lark about the money he was saving on a low-price synthetic "odorless" base.

It was, he proudly told us, much less expensive than Pyrocide 20.

So we broke out paper and pencil and began to check up on the actual cost of his finished spray. The synthetic he had chosen did cost a few cents less a gallon. Then we made an amazing discovery!

In order to mask the odor of this synthetic, he was paying a perfume cost that not only absorbed all the "saving" of the cheaper base, but actually made the cost of finished spray higher than if he had used Pyrocide 20!

Of course, Pyrocide 20 has no odor . . . except the natural aroma of pyrethrum flowers. It will save from $\frac{1}{3}$ to $\frac{1}{2}$ of your perfume costs.

Pyrocide 20 has a ten-year-old record of effectiveness against resistant insects, as well as flies and mosquitoes.

Pyrocide 20 contains no synthetics. It is specially treated to remove "false" pyrethrins; thus the Seil test will show the actual amount of pyrethrins (killing power) present.

Pyrocide 20 is guaranteed to contain 2.5% pyrethrins by weight — 2 grams per 100 c.c. Uniformity is maintained by three analyses during manufacture, the last taking place just before shipment. McLaughlin Gormley King Company, Minneapolis, Minnesota.

PYROCIDE 20

THE PUREST FORM OF PYRETHRINS COMMERCIALLY AVAILABLE

